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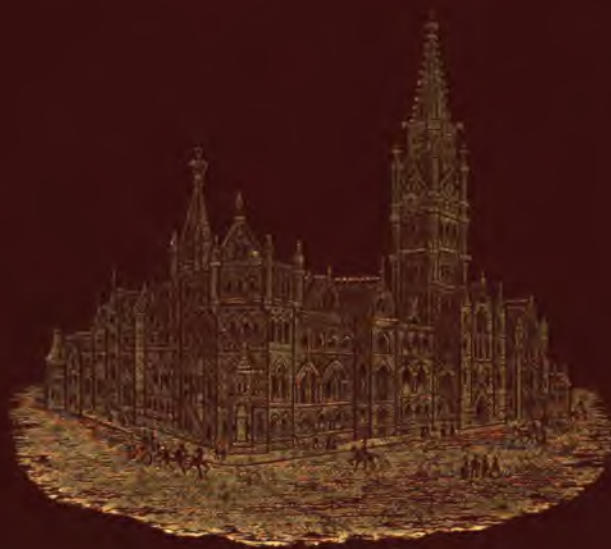
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Corporation of Manchester.

An

Historical Record.



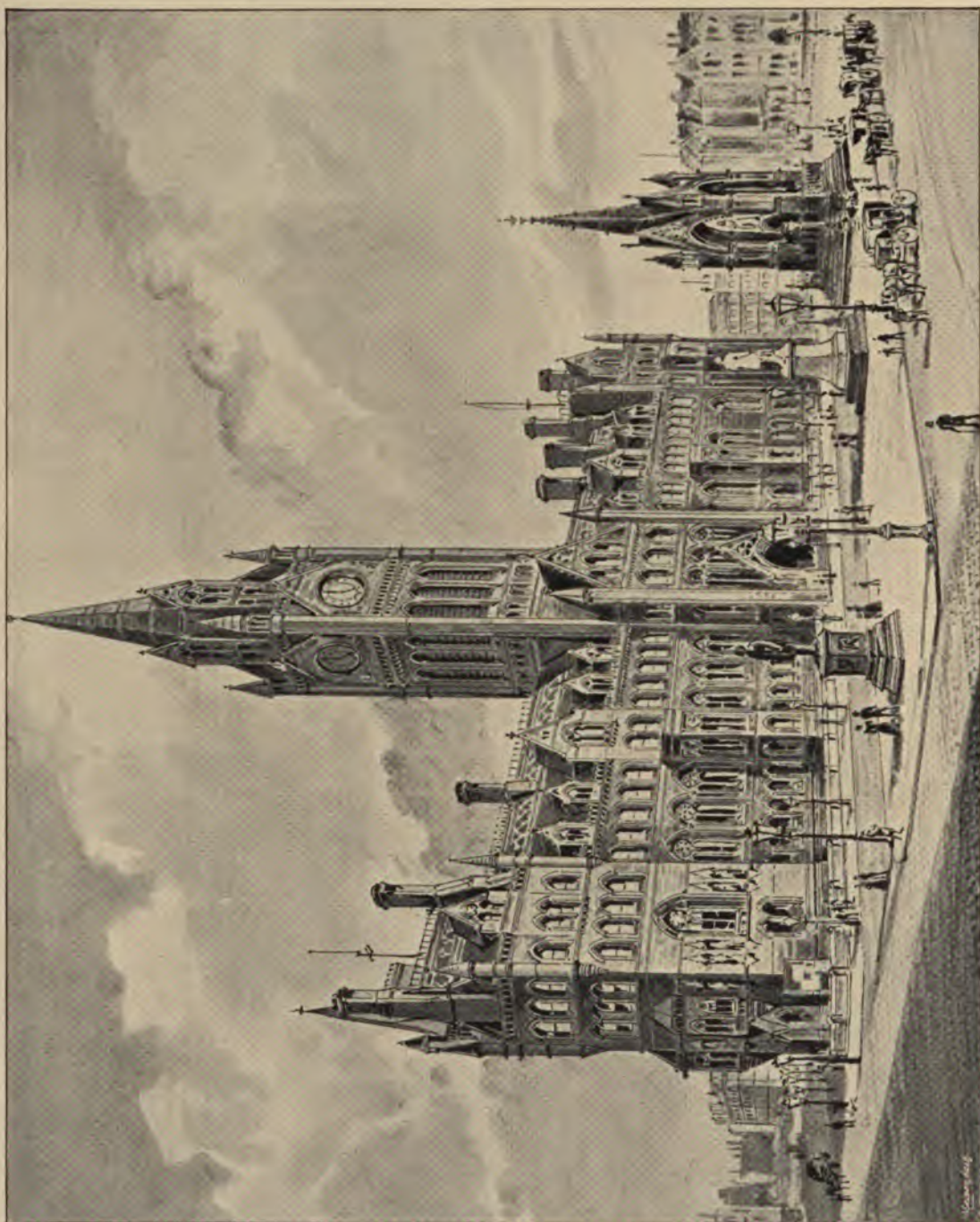
1894.





An Historical Record.





TOWN HALL.

An
Historical Record
of
Some Recent Enterprises
of the
Corporation of Manchester
and of
Its Co-operation in the Completion
of
The Manchester Ship Canal.



MANCHESTER:
HENRY BLACKLOCK & CO. PRINTERS, ALBERT SQUARE.
1894.

CONTENTS.

	PAGE
Introduction... ..	v.
Town Hall Committee (Instructions)	1
The Title of Lord Mayor	5
Extensions of the City Boundaries, 1885 and 1891	9
Manchester a County Borough	37
Honorary Freemen of the City	41
Thirlmere Waterworks	49
The Electric Light Installation	59
Hydraulic Power Supply	69
Adoption of the Act for Promoting Technical Instruction	77
The Sewage Scheme... ..	89
Workmen's Dwellings	103
Parks, Open Spaces, and Playgrounds	107
Public Baths and Washhouses	115
Extension of the Gas Works	117
Extension of Free Libraries	129
Encouragement of Thrift... ..	135
Transfer of the Royal Institution to the Corporation	139
The Frescoes in the Town Hall	145
The Court Leet Records and Constables' Accounts... ..	163
Codification of the Local Acts of Manchester	173
Street Improvements... ..	179
Assistance Rendered to the Ship Canal	187



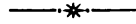


LIST OF ILLUSTRATIONS

	PAGE
The Town Hall Frontispiece	
Thirlmere Lake.—Plans showing Works and Line of Aqueduct... ..	48
Entrance to Electric Light Works	58
Electric Light.—Switch Board	65
Do. do. Dynamos	67
Hydraulic Power.—Pumping Station	69
Do. do. Interior of Engine House	75
New Technical School	76
Ship Canal.—Eastham Locks... ..	186
Do. do. Pomona Docks	191



INTRODUCTION.



THE Queen, on the advice of her responsible Ministers, last year (1893), bestowed upon the Chief Magistrate of the Cities of Liverpool and Manchester the style and title of Lord Mayor. In so doing, the Sovereign has pursued a policy that commended itself to the wisdom of our forefathers, who understood the virtue and value of local self-government, and in ages when the members of the aristocracy of birth were exceedingly powerful were yet careful to give an equal dignity to the representatives of the great municipalities. Until this time, the only English cities whose chief officers bore the title of Lord Mayor were London and York. That the dignity was not confined to the corporation of the national capital is seen by the inclusion of what in the Middle Ages was the most powerful of the provincial municipalities. York, indeed, with its imperial memories, and the great part it played in the history of the nation, might then claim to be the capital of the north. It is noteworthy that London, whose first Mayor was appointed in 1189, owes the grant, in 1354, of the title of "Lord Mayor" to the policy of Edward III., one of the greatest of all our English Kings. But the increase of the population, the advance of industry, the development of trade and commerce, have within the present century created municipalities more active, populous, and wealthy than the greatest of the mediæval corporations. Her Majesty has shown a gracious appreciation of this fact; and the new dignity she has conferred upon the heads of the Corporations of Manchester and Liverpool will doubtless serve to deepen and intensify that sentiment of local patriotism to which England owes so much.

The Corporation of Manchester, grateful for the mark of Royal favour thus conferred upon its Chief Magistrate, have thought that it would not

be an inappropriate memento of the occasion to place upon record some particulars of the public works recently undertaken for the benefit of the community.

The following chapters will show the importance and far-reaching character of the duties that have to be discharged by the council of a great city. There are superfine and ignorant critics who affect to decry the work that is done by municipalities; but the plain, unvarnished statement given in the following pages of the recent enterprises of the Manchester Council will, it is hoped, convince all thoughtful readers that, in the work of local government, there is ample scope for the exercise of the most varied abilities and qualifications, and for the satisfaction of a laudable and honourable ambition. The Manchester Corporation has the daily duty of providing for the security and good order of a community of half a million people; whilst a still larger number are dependent upon its action in some regards, as in the case of water supply, where it has to meet the requirements of a district containing a million of inhabitants. The Corporation have not only to keep a daily and nightly watch and ward, but to look far ahead as to the growing requirements of the City, and to make such provision as may be needed for the expansion of industry and trade; for the attainment of higher standards of health, convenience, and comfort; and for the more general diffusion of education and of literary and artistic culture amongst all classes. The present volume, which contains a statement only of the later undertakings of the Manchester Corporation, will, it is believed, fully justify these claims.

The expansion of the population, since the incorporation of the town in 1838, has led to the existence of a "Greater Manchester," having identical interests and characteristics with the City. By the extension of the boundaries in 1885 and 1890, the area of Manchester has been increased from 4,293 acres to 12,911 acres, the rateable value from £669,954 to £2,857,005, and the population has increased from 220,000 to upwards of half a million. The area has been trebled, and the rateable value has been more than quadrupled. The details of the arrangements by which this consolidation has been effected are instructive, and may form useful precedents in the future.

By the passing of the Local Government Act, 1888, Manchester became a "County Borough," and had transferred to it certain powers hitherto Exercised by the national government, and received, in lieu of the former exchequer grants, revenue from local taxation and a share in the probate duty. The financial details are given in this volume. The Act also enables the City Council to control the bridges of the county and hundred within the City, and also to issue licences for the performance of stage plays. The effect of the Act has been to consolidate the power of the local authority, and to increase the extent and force of the self-government of the City.

The Corporation have gladly taken advantage of the power given by the Act of 1885 for the admission of honorary freemen. This distinction has been conferred on the following gentlemen—Oliver Heywood, H. M. Stanley, Alderman Abel Heywood, Thomas Ashton, and James Jardine: one a distinguished traveller, and the others men who earned the gratitude of the citizens by their public spirit and good works. Mr. Thomas Ashton and Mr. H. M. Stanley are the only survivors.

The water supply of Manchester has for centuries been more or less under the control of the local authorities. The great works at Longdendale have now been supplemented by the still greater enterprise by which the waters of Lake Thirlmere—a hundred miles distant—are conveyed to the City. The history of the Parliamentary struggle on this subject may be commended to the attention of those who think that some improvement is urgently needed in the methods by which powers for public improvements should be granted to local authorities. Many difficulties have had to be overcome, but the result is that Manchester has now secured an excellent supply of water, amply sufficient both for the purposes of trade and of health.

Although Manchester has not been amongst the earliest to adopt the electric light, the delay has at all events enabled the Corporation to profit by the experience of others. Some of the causes of this delay are set forth in the following pages, and the details there given will, it is thought, amply justify the claim that the electric installation which the City now possesses is one of the best in the kingdom.

Several proposals have been made by private companies for the supply of hydraulic power to the City, but the Corporation declined to surrender their rights as the distributors of water, or to give to private traders the power to interfere with the streets. The Waterworks Committee have now arranged a hydraulic water supply in a central area, which will gradually be enlarged as further demands arise.

The connection of the Corporation with elementary education is confined to the not unimportant function of paying the cost; but in regard to technical instruction it is directly responsible, and dispenses grants under the Act of 1889. The Manchester Technical School and the Manchester School of Art have been transferred to the Corporation, external representatives being added to the Committee appointed by the City Council. A scheme of scholarships and exhibitions has been devised, and the Manchester Technical and Art Schools may claim a foremost place amongst the institutions of this class. Some interesting problems are dealt with in the statement on these subjects in the following pages.

The scheme for the prevention of the pollution of rivers, and for the purification of the sewage of the City, has occupied the attention of the Corporation for many years. The problem is by no means an easy one, but the scheme finally adopted will be found to be fully adequate to the important end to which it is directed.

The Corporation, with a view to the lessening of the high death-rate prevalent in the overcrowded districts, have begun the erection of workmen's dwellings. These new buildings will be available for the accommodation of persons displaced by the removal of insanitary houses.

Manchester was one of the first towns in the country to obtain public parks; and in recent years Birch Fields, Cheetham Park, and Gorton Park have been opened, smaller open spaces in various parts of the City have been secured, and Boggart Hole Clough will shortly be added to the possessions of the Corporation.

Although they existed at a much earlier date, public baths and wash-houses have only been a department of the work of the Corporation in the

last 16 years. In that time there have been acquired or built the baths in Leaf Street, Mayfield, New Islington, Osborne Street, Newton Heath, Openshaw, Gorton, and Cheetham Hill Road. At Philips Park there is an open-air bath, which is very popular. In connection with the New Islington Baths there is a fine public hall, which has proved of inestimable value, and several of the swimming baths are used as gymnasia in the winter months.

The Manchester Commissioners of Police obtained, in 1824, the first Act authorising a local authority to manufacture and supply gas. The works were transferred to the Corporation in 1843, and since then there has been a continued increase. In 1865 the production was 1,070 millions; in 1892-3 it was 3,636 millions. For the extension of the gasworks a loan of £500,000, borrowed on capital account, will be expended in the course of the next eight or ten years. The assets in March, 1893, were estimated at £1,735,814, an excess of £897,906. over the liabilities. The works are capable of producing 21,650 million cubic feet per 24 hours.

Manchester was the first town to adopt the Public Libraries Act of 1850. The Reference and Lending Library, then opened at Campfield, were the starting point of a system of public libraries and newsrooms unsurpassed in the kingdom. In addition to the great Reference Library, there are now eleven lending libraries and newsrooms, and four reading rooms without lending libraries.

The Corporation is a considerable employer, having in its service 6,837 persons, receiving £469,845. per annum as remuneration. A scheme for the encouragement of thrift has been devised, and has to an encouraging extent been adopted by the servants of the City Council.

The Royal Institution, which was founded in 1823, was transferred to the Corporation in 1882, when it became the City Art Gallery. Many important additions have been made to the Permanent Gallery, both by gift and purchase. The management is vested in a Committee, on which there are representatives of the Royal Institution as well as of the Corporation.

When designing the noble Town Hall, Mr. Alfred Waterhouse, the architect, left spaces for mural decorations. After many suggestions, the painting of those in the Great Hall was entrusted to Mr. Ford Madox Brown, who completed the last of the twelve pictures only a very short time before his lamented death. These paintings are more or less symbolical of the association of Manchester with various great movements: historical, political, social, industrial, and scientific.—The organ in the Hall was built by M. Aristide Cavaille-Coll, of Paris, and is considered to be one of the finest in England.

Manchester received its royal charter of incorporation in 1838, but in a rudimentary form its municipal life goes back for many centuries. In 1301 it received a charter from the Baron of Manchester, in which many of the privileges of a borough were conferred upon it, whilst the manorial form of government was retained. The feudal rights having been purchased, the members of the Corporation are now the Lords of the Manor of Manchester, and as such have possession of a number of documents connected with the older history of the town. "The Court Leet Records" and "Constables' Accounts" have been edited by Mr. J. P. Earwaker, F.S.A., and published under the direction of a Sub-Committee of the Corporation. The interesting report of this competent antiquary on the Corporation muniments will be found on a later page.

A project of considerable practical importance has been successfully accomplished in the codification of the numerous Local Acts of Parliament relating to Manchester.

The Corporation of Manchester has done much in the matter of improving the roads and streets both in the residential and the business parts of the City. Until 1821, when Market Street was widened under the authority of Commissioners empowered by a special Act of Parliament, the central portions of Manchester had been but little altered from the time of the Stuarts and the Tudors. The Improvement Committee have carried out the transformation of Deansgate, have made many fresh outlets for the

immense and heavy traffic of the City, and have now in hand a number of projected alterations designed in particular to meet the developments of the Ship Canal traffic.

The importance of the Ship Canal to the trade of the City and district is evident and undeniable. When, therefore, the need arose for financial help if it was to be carried to a successful issue, the Corporation agreed to find a sum of five millions for the completion of this great undertaking. The method and terms on which this has been done are detailed in the following pages. The Corporation are satisfied that their investment is one from which the City will reap immense advantages in the future.

This brief survey will show at how many different points the work of the Corporation touches the life of the City. The record is one that justifies some pride as to the manner in which the City Council has discharged the onerous, difficult, and multifarious duties entrusted to it by the citizens. The various enterprises mentioned in this volume represent a capital expenditure of more than twenty millions sterling, and will have a far-reaching effect on the future health, prosperity, and well-being of the community. They have been undertaken in the spirit indicated by the motto of the City, "Concilio et Labore," for it is only by counsel and labour, by patient thought and continuous endeavour, by wisdom and work, that the fair fame of Manchester can be maintained and the well-being of its people made secure and permanent.

For the Committee,

HARRY RAWSON,

Chairman.

April, 1894.





City of Manchester.

.....

At a Meeting of the Town Hall Committee held on the 2nd day of October, 1893.

Present :—

The Lord Mayor, in the Chair.

Aldermen Sir J. J. Harwood, Gibson, and Rushworth.

Councillors Batty, Robinson, and Ward.

The following Proceedings of the SPECIAL SUB-COMMITTEE of 28th September, 1893, in reference to the conferring of the title of Lord Mayor, were read :—

Present :—

The Lord Mayor, in the Chair.

Aldermen Sir J. J. Harwood, Leech, and J. Thompson.

Councillors Pingstone and Rawson.

Memorandum.

Read Resolution of the Council of the 16th August, 1893, requesting the Town Hall Committee to consider in what manner the conferring by her Majesty of the title of Lord Mayor upon the Chief Magistrate of the City can be suitably recognised, and to report upon the subject to the Council, and appointing for that purpose Alderman Joseph Thompson and Councillor Rawson members of the Committee.

Memorandum.

Read following Resolution of the Town Hall Committee of the 20th September, viz.:—"That the following Sub-Committee be appointed, to consider and report as to the most suitable way of celebrating the conferring of the title of Lord Mayor on the Chief Magistrate of the City, viz., the Lord Mayor, Aldermen Sir J. J. Harwood, Leech, Mark, and J. Thompson, Councillors Pingstone and Rawson."

Resolved unanimously,—

That Councillor Rawson be appointed Chairman of this Sub-Committee.

Memorandum.

The Sub-Committee considered that a suitable method of commemorating the interesting event above referred to would be an "Historical Review of some Recent Enterprises of the Corporation of Manchester."

The Chairman then submitted the following

SUGGESTIONS:

(1) The work should be done quickly, and appear, if possible, coincidently with the opening of the Ship Canal and the completion of the Thirlmere Waterworks.

(2) It should be divided into several departments, each undertaken by a competent writer.

(3) It should be done under the direction of a small Sub-Committee, specially appointed.

(4) In addition to the Letters Patent conferring the title of Lord Mayor of the City of Manchester, the proposed Record should include a description of the Thirlmere Waterworks, the Extension of the City boundaries, the Assistance rendered to the Manchester Ship Canal, and other important works or matters in which the Corporation has been concerned during recent years.

Resolved,

That the suggestions now submitted be approved. That Councillor Rawson (the Chairman) be authorised to obtain the co-operation of such members of the Council and other persons as he may desire, and

also to obtain such assistance as in his opinion may be necessary in order to enable him to prepare the various reports and documents that may be requisite.

Resolved,—

That the Lord Mayor be requested to arrange for a Special Meeting of the Town Hall Committee to consider the foregoing Proceedings, so that the same may be presented to the Council at its meeting on the 4th October next.

Resolved,—

That the Proceedings of the Special Sub-Committee now read be approved and adopted.

Resolved,—

That the Special Sub-Committee be authorised to take all necessary measures for giving effect to the foregoing proceedings and resolutions.

Resolved,—

That the Proceedings of this day be read in extenso at the meeting of the Council to be held on Wednesday next, and that a print thereof be in the meantime forwarded to each member of the City Council.

(Signed) A. MARSHALL, Lord Mayor,
Chairman.

At a Meeting of the City Council, held October 4th, 1893, the above proceedings were read and approved.





The Title of Lord Mayor.



ON THE 16th June, 1893, a gratifying and unexpected announcement was received by the Mayor of Manchester (Alderman Marshall), in a letter addressed to him by the Prime Minister, namely, that the Queen proposed to confer a title of honour upon the person who for the time being might be the Chief Magistrate of Manchester. The announcement was simultaneously made in the public press that a similar honour was to be conferred upon the Mayor of Liverpool. Hitherto the title of Lord Mayor had been the exclusive privilege of the Chief Magistrates of London, Dublin, York, and—more recently—of Belfast. Now the two great Lancashire Cities were to be raised to a higher rank among English Municipalities. The proposal was gratifying no less to the members of the Corporation than to the citizens at large. The following is a copy of Mr. Gladstone's letter:—

10, Downing Street, Whitehall,
14th June, 1893.

Sir,—I have the honour to acquaint you that the Queen has been graciously pleased to approve of granting the title of Lord Mayor to the Chief Magistrate for the time being of the City of Manchester.

It gives me great pleasure to be the medium of this communication, and I have to request that you will be so good as to inform me whether the proposal is one which will be agreeable to yourself and your fellow-citizens.

I have the honour to be, Sir,
Your obedient servant,
W. E. GLADSTONE.

The Worshipful the Mayor of Manchester.

The Mayor's letter in reply was as follows:—

Town Hall, Manchester,
15th June, 1893.

Sir,—I have the honour to acknowledge the receipt of your letter of the 14th instant, stating Her Majesty's intention to confer the title of Lord Mayor upon the Chief Magistrate of this City, which I have received with feelings of great satisfaction, and I am sure that my colleagues of the City Council and the citizens of Manchester will be equally gratified.

May I express my deep sense of the distinction thus conferred by Her Most Gracious Majesty upon this City, and also my sincere gratification that your own illustrious name is associated with this honour to Manchester, which I beg to accept on behalf of myself and my successors in office.

I have the honour to be, Sir,

Your obedient servant.

A MARSHALL,

Mayor.

The Right Honourable William E. Gladstone, M.P.,
Her Majesty's First Lord of the Treasury, &c., &c., &c.,
Downing Street, London, S.W.

The Council met on the 24th June, when the foregoing correspondence was read; and on the motion of Mr. Alderman Leech, seconded by Sir John Harwood, the following resolution was unanimously passed:—

That the Council learn with much pleasure that Her Majesty the Queen has been pleased to approve of the granting of the title of Lord Mayor to the Chief Magistrate for the time being of the City of Manchester, and desire that this resolution be communicated to the Prime Minister.

The Council also presented their sincere congratulations to Alderman Marshall and Mrs. Marshall upon the honour thus conferred upon them and upon the City Council.

The Lord Mayor, in acknowledging the resolution, said the honour was no doubt great, but he assured the Council that, so far as he personally was concerned, their kindly sympathy and support granted to him in the discharge of his office were of yet greater value. He added that Manchester had developed its municipal institutions to a greater extent than any other City, and was pointed to universally as a model municipality in the arrangement of every detail of its local affairs.

A letter was received by the Town Clerk (Mr. Talbot) from the Home Secretary, dated 11th August, announcing the despatch from London of the Letters Patent, and in due course the document was received. It was in the following terms:—

COPY CHARTER.

VICTORIA by the GRACE of GOD of the United Kingdom of Great Britain and Ireland Queen Defender of the Faith. To all to whom these Presents shall come Greeting. WHEREAS by our Charter dated the twenty third day of October in the second year of our Reign We were graciously pleased to Incorporate the Inhabitants of the Borough of Manchester and their successors by the title of The Mayor Aldermen and Burgesses of the Borough of Manchester AND WHEREAS

We by our Royal Charter dated the twenty-ninth day of March in the sixteenth year of Our Reign did constitute the said Borough of Manchester a City and did declare that the Mayor Aldermen and Burgesses of the said Borough should thenceforth be one body politic and corporate by the name and style of the Mayor Aldermen and Citizens of the City of Manchester NOW KNOW YE that our Will and pleasure is and We do hereby declare and ordain that from and after the date of these presents the Chief Magistrate now and for the time being of the said City of Manchester shall be styled entitled and called Lord Mayor of Manchester And We do hereby authorize and empower the Chief Magistrate of the said City of Manchester now and for the time being henceforth at all times to assume and use and to be called and named by the style title and appellation of Lord Mayor of Manchester and to enjoy and use all and singular the rights privileges pre-eminences and advantages to the degree of a Lord Mayor in all things duly and of right belonging IN WITNESS whereof We have caused these Our Letters to be made Patent. Witness Ourselves at Westminster the third day of August in the fifty-seventh year of Our Reign.

By Warrant under the Queen's Signed Manual

MUIR MACKENZIE.



After the assumption of the title doubt was expressed, both in Manchester and Liverpool, as to the correct prefix to be attached to it. The assumption of "Right Honourable" was called in question. This knotty point was set at rest by Sir Albert W. Woods, K.C.M.G., Garter King of Arms, to whom it was referred by the Town Clerk of Liverpool. His judgment was that the Lord Mayor for the time being was entitled to the prefix of "Right Honourable," and also to be styled "His Lordship," as a privilege and courtesy attached to his office.





Extensions of the City Boundary, 1885 and 1891.



MANCHESTER received its Charter of Incorporation on the 23rd October, 1838, and its municipal life began with the election of the Town Council on the 14th December in that year. The area incorporated, consisting of Manchester Township and the neighbouring Townships of Chorlton-upon-Medlock, Hulme, Ardwick, Cheetham, and Beswick, was 4,293 acres, and the rateable value of the incorporated borough was £669,954. The area of the City—having since been twice extended, namely in 1885 and 1890—now is 12,911 acres, and its net rateable value £2,857,005; thus the area of Manchester, as compared with what it was at the date of incorporation has (speaking broadly) been trebled, and its rateable value now exceeds by four-and-a-quarter times the amount at which it stood in 1839. To trace the successive stages of this vast growth must be of considerable interest.

The first extension of the City boundary was brought about in 1885 by the inclusion of the townships of Bradford, Harpurhey, Rusholme, and parts of Moss Side and Withington. But it is necessary, before dealing with this, to refer to the important measure sanctioned by Parliament ten years earlier, by which the interests of the several townships forming the original—and then still existing—municipality were consolidated and their rates equalised; for there can be no doubt that the subsequent extensions of the City, though not contemplated on the passing of the Act of 1875, were greatly facilitated by that measure.

The question of the equalisation of the township and highway rates in the several districts of the City was referred by the Council to the General Purposes Committee in 1872, at the instance of the late Alderman Grundy; and at a later date (January, 1873) the same gentleman moved the Council—as connected with the same subject—

Also to report upon the position of the Council in relation to the Gas and Improvement Departments.

And

That the Committee be instructed to consider whether an equitable arrangement cannot be arrived at by which the present mode of dividing the gas profits might be abolished, and, in consideration of the City taking over the liabilities of the Gas and Improvement Committees, the gas works and all lands now belonging to the Township of Manchester declared to be the property of the entire City.

Before 1871 separate township and highway rates were collected in each township within the municipal borough, but (by section 16 of the Improvement Act of that year) the Council was empowered to raise and levy such rates by a direct precept upon the Overseers. The six townships were, however, still treated as separate districts for lighting, sewerage, scavenging, and highway purposes, and the object aimed at by Alderman Grundy was the consolidation of the rates for all municipal purposes, and the giving to every township an equal interest in the City funds.

The resolution was carried with but two dissentients, and the General Purposes Committee at once gave effect to the Council's decision by referring it to the Sub-Committee that was already dealing with the suggested equalisation of the township and highway rates.

Amongst the advantages which, in the Sub-Committee's opinion, would be secured by the proposed change were the following:—

1. The removal of the anomaly of similar departments of local government being conducted by six different committees for the six townships of the City upon principles which were not in all respects uniform, and which under certain circumstances might become, as regarded the whole City, antagonistic. Such results, the Sub-Committee said, might be anticipated so long as a certain independence of action in the management of each township was claimed by the Township Committee, which necessarily lessened the disposition of the Council to interfere in what were supposed to be purely township affairs. The consolidation of all similar business under one authority (as was the case with the business of the Watch, Nuisance, Hackney Coach, Parks, Free Libraries, Waterworks, Gas, and other existing Committees) appeared to the Sub-Committee to be most desirable.

2. The concentration of the business of the several townships under one central management would lead to economy in matters both of administration and accounts. Separate officers for the transaction of township business would cease to be necessary; and the accounts of each township, which were kept upon the separate township principle by five clerks or book-keepers in at least four different sets of books for each township, would be kept in the Treasurer's Department in one set of books, and under his control. In like manner the duties of Township Surveyors would, with obvious advantage, be concentrated in one central office.

3. The Township Committees, with their limited functions, would cease to exist, and the business transacted by them would be transacted by committees comprising members from and representing all parts of the City, and the causes, real or imaginary, for jealousy and distrust which occasionally arose between city and townships, or between township and township, would be removed, and at the same time a greater sense of responsibility would be imposed upon the Council in the exercise of its legitimate control in all matters affecting every part of the City. The paving and sewerage of new streets, the repair of highways, and the lighting and scavenging of the streets of the whole City would be conducted upon uniform principles; and the introduction of any improvement in any of these departments would not be obstructed or complicated by distinct and, it might be, by rival township interests.

4. Finally it was suggested, as a great advantage, that every cause would be removed for the feeling, more or less entertained, that the burdens chargeable upon the township and highway rates pressed with undue weight, and greatly for the benefit of the Township of Manchester, upon the several Townships of Chorlton-upon-Medlock, Hulme, Ardwick, Cheetham, and Beswick.

The principle of the City Rate, which in 1872 applied to the raising of a sum of £151,880, would be applied in obtaining the sum of £82,022 hitherto derivable from six separate township and highway rates; and one estimate of expenditure for all objects, and one rate only, would as the result have to be made for municipal purposes upon the entire City.

In approaching the further question as to the position of the Council in relation to the Gas and Improvement Departments, and especially whether an equitable arrangement could not be arrived at by which the then existing mode of dividing the gas profits might be abolished, and, in consideration of the taking over the liabilities of the Gas and Improvement Committees, the gas works and all lands belonging to the Township of Manchester declared to be the property of the entire City, the Sub-Committee set themselves, first of all, to determine the legal questions involved. They found (quoting from a report prepared by the Town Clerk and presented to the Council in 1864)—

- (1) That the gas works belonged to and were the property of the inhabitants and ratepayers of the Township of Manchester;
- (2) That such works and the management thereof were vested in the Corporation as Trustees for the inhabitants of such township;

(3) That the mortgage debt owing and secured upon the gas works was the debt of such township;

(4) That the amount of profits fairly or reasonably obtainable by the manufacture and sale of gas could only be determined by reference to the capital employed, or, in other words, the value of the property employed, in its manufacture;

(5) That the amount obtained upon mortgage for the purposes of the gas works, or which might at any time be owing, in no way affected the value of the works;

(6) That, so far as the property in the gas works and the rights of the Township of Manchester in respect thereof were concerned, it was immaterial whether the amount expended in such works had been paid out of the surplus profits belonging to the inhabitants of such township, or out of the moneys borrowed upon the security of their property; and that, assuming that the whole of the debt contracted had been paid off, and that there was no charge whatever upon the gas works—that there was not, in fact, one farthing of debt owing—the capital employed, as represented by the value of the works belonging to the inhabitants of the Township of Manchester, would remain the same;

(7) That the whole of the surplus rents or profits obtained by the supply of gas belonged to and ought, subject of course to any special legislation upon the subject, to be expended for the benefit of the ratepayers at large of such township; and that by the law then in operation the surplus profits were required to be expended “in and towards the improvement of the Township of Manchester.”

But although such was the legal position of the gas works, they had not in fact for many years been so dealt with or treated by the Corporation. With the full concurrence of all parties, and because it was felt to be only reasonable, if not strictly legal, the profits arising from the works had not been expended within or for the exclusive benefit of the Township of Manchester. The Council had, upon the recommendation of the Improvement Committee, determined to put a liberal construction upon the power given to expend the surplus funds in carrying out improvements, and to apply a portion of the funds in effecting improvements, partly situated within and partly without the limits of such township, “in *the approaches to the Township of Manchester*.” The arrangement was, as described by Alderman Grundy in introducing his motion to the Council:—

That one moiety of the profits should be assigned to and expended within the Township of Manchester, and for the benefit of that township, to which the works as well as the surplus profits in fact belonged; and that the remaining moiety should be divided between the several townships of Manchester, Chorlton-upon-Medlock, Ardwick, Hulme, and Cheetham, in proportion to the gross amount of gas rents received from each of such townships; the moneys assigned to each township (except Chorlton-upon-Medlock) to be expended by the Improvement Committee in carrying out improvements in which, so far as Cheetham, Hulme, and Ardwick were concerned, such townships were more especially interested.

The arrangement with regard to Chorlton-upon-Medlock was that in consideration of that township giving up the right which under

its own local Act it possessed of establishing gas works, the portion of profits assigned from time to time to the township should be expended by the Township Committee in effecting improvements within the limits of Chorlton-upon-Medlock.

It appeared to the Sub-Committee, upon a review of all the facts, that the duty imposed upon them was to consider and report "whether the arrangements which for some time had existed could not, upon fair and equitable principles, and with advantage to the whole City, be more fully and completely carried out by and under the sanction and authority of law." In determining this question it was necessary to ascertain what would be the financial effect which such a change would have upon the several townships within the City, in order that it might be seen at what cost to the Township of Manchester the resulting advantages could be secured.

Inquiry showed that the liabilities of the Townships of Chorlton-upon-Medlock, Cheetham, Ardwick, and Beswick exceeded the estimated value of the property belonging to them, in the aggregate, by the sum of £39,942, whilst in the Township of Hulme there was an excess in the estimated value of the property over the liabilities of £1,787, making the actual liabilities of such townships beyond the value of property amount to the sum of £38,155. As regarded the Township of Manchester, the Sub-Committee found that the estimated value of the property and assets, including the gas works, amounted to the sum of £1,015,739; whilst the liabilities, including the then existing debts and the estimated cost of various improvements which were in progress, and for the carrying out of which the Improvement Committee was liable, amounted to £908,631; showing an excess of assets over liabilities of £107,108. The latest returns of the Overseers showed the annual rateable value of property within the City to be £2,112,024, of which the value of property in the Township of Manchester amounted to £1,404,032, or about two-thirds of the value of property within the City. The Sub-Committee's conclusions were embodied in the following paragraphs of the report:—

It thus appears that the effect of the change would be to confer, at the expense of Manchester, an apparent but not very considerable benefit on the out-townships in case the gas works and property of the Township of Manchester were, subject to the payment of the debts and liabilities of that township, to be transferred to and be made the property of the City. The gain on the one hand, and the sacrifice which may appear to be made on the other, would, however, be more in appearance than reality; whilst,

in the opinion of your Sub-Committee, the advantages which would be realised would more than compensate for any sacrifice which might be made by the Township of Manchester. The most important property belonging to the Township of Manchester is the gas works, which, as has been already stated, has for many years past been dealt with by the Council as property in which the whole City was more or less interested.

If made by law the property of the whole City, any little jealousy in relation to the gas establishment which has heretofore existed as between the various townships comprised within the City will be ended. The property will belong to the whole, and not to a portion only, of the inhabitants. The whole City would be interested in its prosperity, and the energy of the Council would be devoted to making the working of the establishment as beneficial as possible to the inhabitants generally, to whom the works under such circumstances would belong. The works would belong, not to the Township of Manchester, but to the whole City; and the profits derived from the sale of gas to such portion of the inhabitants as might be consumers, at a fair and reasonable market price, would belong to the inhabitants generally, and would be expended as might be at any time determined, either in carrying out improvements within the City or in reduction of rates payable by the whole of the inhabitants.

Under the changed circumstances, the observations made in relation to the effect of the equalisation of rates would apply with equal force to the Improvement Department. The Improvement Committee would no longer, in any sense, represent one township only, but the whole of the City; and the funds arising either from the gas works, or which might at any time be placed by the Council at the disposal of the Committee for improvement purposes, would be expended in carrying out within the City such improvements as, under all the circumstances, might be deemed to be most necessary and most urgently required.

The Sub-Committee's report was considered at a special meeting of the General Purposes Committee on the 10th December, 1873, and approved.

The Council, at its next meeting (7th January, 1874), confirmed the decision of the General Purposes Committee, and resolved:—

That the Committee for General Purposes be authorised and requested to take all steps necessary to carry out the recommendations contained in the report and proceedings which are this day approved of and adopted.

This resolution the Council passed unanimously.

The value to the City of this measure was that it promoted simplicity, economy, and efficiency in several of the most important departments of the Corporation. Without such a consolidation of interests as it effected, it is easy to see that the subsequent enlargements of the City (in 1885 and 1890) would have been beset with great and possibly insurmountable difficulties. The scheme was admirably conceived and most ably presented to the City Council by Alderman Grundy, whose disinterested services to the public in this and many other matters were warmly acknowledged by his colleagues.

Although the extension of the City boundary did not receive Parliamentary sanction until 1885, the initial step towards it was taken five years earlier, when admission was sought by the Townships of Newton Heath and Harpurhey. At a meeting of the Parliamentary Sub-Committee on the 16th August, 1880, deputations attended representing the Newton Heath Local Board and the ratepayers of Harpurhey. After hearing the observations of the Chairman of the Newton Heath Local Board and others in support of the proposal for amalgamation, the following statement was, by desire of the Sub-Committee, made by the Mayor (Alderman Patteson) to the deputation :—

So important a subject as the admission of the inhabitants of other townships into the privileges of citizenship of Manchester can only be determined by the Council. If the deputation desire to proceed further in the matter, it would be for the bodies now represented, and who might be desirous of the change, to forward, through the Mayor, a memorial or other communication to the City Council, containing any statistics or information they think proper; it would then be for the Council to determine what course should be taken in relation to such communication.

At a subsequent meeting of the Council, memorials, which had been forwarded through the Mayor, were received from Harpurhey and Newton Heath. That from Harpurhey stated :—

Two public meetings have been held in the township on the subject, both of which decided by large majorities to be incorporated (if possible) with the City of Manchester. The principal reasons for desiring amalgamation with the City are the probable difficulties that may arise in a small area like Harpurhey (containing only 193 statute acres) in dealing with the sewage and carrying out the Rivers Pollution Prevention Act. The rateable value of the township is £16,033, being 1,364 assessments; the population is about 4,000. Your memorialists seek to be amalgamated on the ground of being free from pecuniary liabilities, and the close contiguity and peculiarity of the boundary with the City. The Corporation are landowners in the township, and already supply the township with gas and water. The local rates for the current year were:—poor, 1s. 6d.; highway, 9d.; and lighting, 5d. in the pound respectively. The highways are in a very good state of repair; the side streets (in a majority of cases) are kept and are in good condition.

The memorial from Newton Heath was signed by the Chairman of the Local Board (Mr. E. M. Dixon) and the Clerk (Mr. John Neild). It contained statistics showing, amongst other particulars, that the area of the district was 1,350 statute acres, that it contained a population of about 27,000, and that its net rateable value was £80,296. 10s. The owners and ratepayers had approved of amalgamation, subject to satisfactory arrangements being made with the Corporation; and the Local Board had been empowered to ascertain upon what terms

incorporation could be effected. Amongst other matters which seemed to render such a course necessary, the memorialists referred to the difficulty experienced in Newton Heath in regard to sewage disposal. The Local Government Board had been pressing for the carrying out of the provisions of the Rivers Pollution Prevention Act. A considerable portion of the sewage of the Newton Heath district naturally gravitated towards Manchester, and could (and sooner or later must) be dealt with by the Council as one authority much more effectually, and no doubt at a less cost, than it could be dealt with in the district itself. Attention was likewise called to the fact that the demolition of so many dwelling-houses in the City had driven hundreds of families into the suburbs to reside, whilst their occupations or places of business remained in the City, and all more or less had interest there; and it was desirable on all grounds, both sanitary and economical, that the number of authorities for purposes of local government should be reduced.

The two memorials having been referred to the General Purposes Committee, that Committee resolved :—

That the question of incorporating Newton Heath and Harpurhey and the extension of the municipal boundaries be referred to a Special Sub-Committee for consideration and report, such Committee to consist of the Mayor (Alderman Patteson), Aldermen Baker, Curtis, Grundy, Heywood, Thompson, Worthington, Councillors Batty, J. A. Birch, Bright, W. Brown, Craven, Goldschmidt, Schofield, W. Smith, and Southern.

The Sub-Committee approached the matter as one of the first importance, involving not merely the admission of two townships, but also the general principle of the extension of the City boundaries, and how far such extension might be desirable or necessary. They presented a report, which, at a meeting of the Council held on the 25th of October, 1882, was, with the recommendations it contained, approved and adopted.

The General Purposes Committee resolved to invite the local authorities of Bradford, Newton Heath, and Harpurhey—which alone, of all the authorities in the townships contiguous to Manchester, seemed anxious to negotiate—to a conference at the Town Hall. Representatives of these townships met the Incorporation Sub-Committee on the 22nd December. The Mayor informed the deputation that the view of the Corporation, as expressed in the report of the Sub-Committee dated 16th October, was that it was desirable to make a

more considerable extension of the City boundaries than would be involved by the admission of the districts then represented. Having been invited to express their views, the gentlemen representing each township stated in general terms their desire to be included in the City either as then existing or in the "Greater Manchester."

A deputation from Harpurhey, who waited upon the Sub-Committee on the 29th October, 1883, expressed the opinion that the ratepayers of that township should come in on equal terms as if part of St. Michael's or any other ward of the City, and pay the City rate, if the Corporation of Manchester would undertake the management of Harpurhey in the same manner as they dealt with other parts of the City. A deputation from Bradford assented to incorporation upon the terms offered by the Corporation, namely :—

That upon any incorporation of the Townships of Newton Heath, Harpurhey, and Bradford, it should be made a condition that until the streets and sewers are put into a satisfactory state, equal to the standard of the City, separate rates for the purpose of paving, sewerage, and highways should be levied and expended in each of those townships.

The Local Board of Newton Heath decided to leave the question to the decision of a meeting of their ratepayers. Such meeting was held on the 5th December, 1883, when a resolution in favour of incorporation was submitted, and rejected by a large majority. The proposal, however, was not abandoned by the Local Board, for at a meeting held on the 13th February, 1884, they passed the following resolution :—

That this Board unanimously approves of, and is willing to recommend to the ratepayers, the incorporation of Newton Heath with Manchester on the basis of equal rating and equal privileges to this district; reserving for future settlement such questions of detail as the position of the permanent officials, and of property owners who have complied with the bye-laws of the Board up to the present time.

The Incorporation Sub-Committee recommended the Council to assent to the admission of Newton Heath upon the basis of the foregoing resolution; and at length the General Purposes Committee received instructions to prepare a scheme with respect to the extension of the municipal boundaries, and to arrange the details with any local authorities desiring incorporation.

On the 23rd October, 1884, the Sub-Committee reported that, as regarded Newton Heath, Bradford, and Harpurhey, clauses had been

prepared on behalf of the Corporation for carrying into effect the arrangement with those townships. In the first place it was proposed that the added districts—namely, Newton Heath, Bradford, and Harpurhey—should elect six councillors by way of addition to the existing City Council, and without disturbing the existing wards of the City, and that, as a necessary consequence, two additional aldermen should be added to the Council, thus making an addition of eight. The question whether the added districts should be divided into two wards would be determined by the Local Government Board upon a local inquiry after the passing of the Act. The Sub-Committee felt that it would be the desire of the Corporation to act with consideration towards the owners of property in relation to all paving, sewerage, and sanitary alterations. The question of the officials of the districts to be included had also been considered, and it was proposed that they should be taken into the employment of the Corporation, or otherwise compensated. The Sub-Committee believed that a corresponding extension of the district of the Manchester School Board might be properly embraced in the Act, and they had suggested this course in their conferences. They were anxious that these arrangements should be so carried out as to form a precedent for hereafter including other townships as separate wards, with additional representation. At some future period a general rearrangement of the wards of the enlarged City would, it was felt, be needful. The Sub-Committee proposed that notices should be given to enable a Bill in Parliament to be promoted in the then ensuing session. The effect upon the City of the above proposals would be as follows:—

District	Population, 1881	Acreage	Net Annual Value
			£
Newton Heath	29,189	1,350	95,942
Bradford	16,121	288	43,867
Harpurhey.....	4,810	193	15,918
	50,120	1,831	155,727
Manchester (City)	341,414	4,293	2,265,984
Total.....	391,534	6,124	2,421,711

The Sub-Committee had an interview on the 27th November with gentlemen representing the three townships. There were still some

questions to be settled, and Newton Heath had interposed a serious difficulty by raising a demand for six representatives in the City Council, besides other concessions. Both that township and Harpurhey desired exemption from the School Board rate during a certain period. As to the last-named matter, the Sub-Committee agreed to a proviso exempting the two townships "until such time as school accommodation may in those respective townships be required and provided by the City School Board." But as to representation, the Newton Heath representatives were informed that their requirement as to six councillors and two aldermen for Newton Heath could not be introduced into the Bill. The Newton Heath Local Board thereupon resolved that, whilst approving of the concessions already made, they must decline to recommend the incorporation of the district with Manchester unless at least six councillors and two aldermen could be appointed. The Committee refused to depart from the arrangement which they had made, but offered to leave the matter in the hands of the Local Government Board. This, however, did not satisfy Newton Heath, and the Local Board demanded the withdrawal from the Bill of all provisions relating to their township. The Bradford School Board wrote on the 24th December, asking that a clause might be inserted providing for the dissolution of that Board, and the transference of its functions to the Manchester School Board, the latter body to have an increase in the number of its members. This, although at first deeming it beyond their province, the Council ultimately agreed to, as regarded the transference.

The Local Board of Rusholme about the same time approached the Sub-Committee with proposals for amalgamation. A deputation waited upon the Committee to discuss terms, and at length clauses were arranged providing that, under incorporation, Victoria Park should remain and be a private park, and that the public should have no right of way over the roads therein except on foot; the occupiers, nevertheless, to be liable to be rated to the City rate, and to be supplied with gas and water on the same terms as Manchester citizens. Also that the Corporation should forthwith execute such works as might be necessary to divert the sewage of Rusholme from the brooks and streams within the district of Rusholme, and to take such sewage into the sewers of Manchester, the cost of such works to be paid out of the rate of the extended City. Also, that in relation to

privies and ashpits existing in the township at the passing of the Act, the Corporation, in exercising the powers of the Public Health Act, 1875, or any local Act, should be subject to the following conditions and provisions, namely :—

1. No demand for payment of any expenses or charges incurred by the Corporation in the alteration or reconstruction of any such privies or ashpits shall be made by the Corporation until after the expiration of three years from the passing of this Act, when such demand may be made upon the owner for the time being.

2. After the expiration of such period of three years, the repayment of such expenses or charges shall be made to the Corporation by annual instalments (with interest) extending over seven years.

The Local Board also claimed exemption from the School Board rate “until such time as school accommodation may be required and provided by the City School Board.” The representation of Rusholme in the City Council to be decided by an Inspector of the Local Government Board, or other Commissioner appointed by the Act. The clause in the Bill granting compensation to officers to be extended to Rusholme.

A public meeting of the owners and ratepayers of the City was held, in pursuance of the 35th and 36th Victoria, c. 91 (the Borough Funds Act), to give formal sanction to the application to Parliament. The resolution submitted was :—

That this meeting consents to the promotion by the Council of the City of Manchester in the next session of Parliament of a Bill to extend the Boundaries of the City of Manchester, and to make better provision for the making and levying of rates within the City, and for other purposes; such Bill to be promoted at the cost of the City Rate of the said City.

The resolution was opposed mainly on the ground of certain provisions of the Bill as regards rating, which were subsequently withdrawn. On being put to the vote the resolution was lost, 45 ratepayers and property owners voting for and 69 against it, and thereupon a poll was demanded.

For the information of persons interested, the Incorporation Sub-Committee caused a memorandum to be prepared and published, showing the necessity which had arisen for the proposed City extension. It was pointed out that the position of Manchester, as regarded population, was unsatisfactory. Whilst other large towns

were upon the increase, the population of Manchester, owing to extensive removals to the suburbs, was absolutely decreasing, as was shown by the following table:—

Name of Town	Census of 1871	Census of 1881	Increase	Decrease
Liverpool	493,405	552,508	59,103	...
Birmingham	343,787	400,774	56,987	...
Manchester	351,189	341,414	...	9,775
Leeds	259,212	309,119	49,907	...
Sheffield.....	239,946	284,508	44,562	...

It was further pointed out in the memorandum that a Committee having for its object the extension of the municipal boundaries was appointed in the year 1880, and that this Committee had in October, 1884, presented a report showing a certain measure of progress. The out-townships, it was added, were dependent on the ratepayers of Manchester for the supply of gas, water, markets, public parks, cemeteries, free libraries, baths and wash-houses, and schools. Some of these advantages were obtained without any payment whatever, and although in other instances there might be a differential rate as against outsiders, yet this circumstance by no means countervailed the immense benefit which the suburbs derived from the City. It would be well that the whole district known as "Manchester" should be comprised within the municipal boundary, and the present Bill was the first step in that direction. The Bill, if allowed to pass, would lay the foundation for including in the City other adjoining local authorities desirous of being incorporated, the terms being arranged by means of a local inquiry before the Local Government Board Inspector, by whom all authorities would be heard. The Committee said:—

It is desirable that the ratepayers of Manchester should, by voting, show that they desire to see the extension of the City carried out. By their apathy the Bill may be lost. It is to be hoped that there will be such an emphatic majority in favour of the Bill as will have effect in Parliament in the event of any opposition arising there. The question of extension of boundaries is found to be sufficient for this Bill, and the important but intricate subject of rating is to be withdrawn by resolution of the Council. It is printed as part of the question to be submitted to the ratepayers, but that course is unavoidable, as the title of the Bill cannot be altered until a later stage.

The result of the poll was declared on the 27th January, 1885. The number of good voting papers handed in was 22,719, and upon these were recorded 26,958 votes. The voting was as follows:—

For the resolution	25,657
Against	1,301

Majority	<u>24,356</u>
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It was found that not more than 27 persons voted as owners. The number of ratepayers polled represented about half the constituency.

A minor difficulty arose out of the attitude of the Withington Local Board. This Board objected to the inclusion within the City of that portion of Withington Township (Fallowfield) which at the time formed part of the Rusholme Local Board District; and they petitioned Parliament that this might be added to the rest of Withington, and not given to Manchester.

Memorials on the grounds of non-compliance with Standing Orders in relation to the incorporation of Rusholme were lodged on behalf of the Chairman of the Withington Local Board and the Clerk of the Peace of the County of Lancaster. The Lords Committee, however, on the 28th April, after hearing the objections laid before them, decided to suspend their Standing Orders, and the Bill was allowed to proceed. The effect of the decision of the Standing Orders Committee of the Lords was to clear the way for obtaining Parliamentary sanction to the arrangement between Rusholme and Manchester. The opposition of Withington was, at a later stage, withdrawn. The Bill was passed by the Select Committee of the House of Lords substantially in the form in which it was submitted to them, except that Newton Heath was exempted from its operation. The provisions of the Manchester Town Hall and Improvement Act, 1866, under which the charges for the attendance of the fire brigade within the City were then made, were not to apply to the added part of the City. Clause 24, under which other districts might be added to the City by Provisional Order of the Local Government Board, were rejected by the Committee, and clauses safeguarding the interests of the county justices were inserted.

In the House of Commons the Bill was practically unopposed. It was passed through its various stages, and finally received the Royal Assent on the 22nd July, 1885.

Arrangements were at once made for holding an inquiry under the Act before the Commissioner appointed (Mr. Richard Smith, Barrister-at-Law) with reference to the extension wards, and the wards immediately adjoining. The Commissioner appointed Friday the 31st July for holding his inquiry. The Incorporation Sub-Committee meanwhile prepared a statement showing the arrangements in reference to the added districts and wards adjoining, which they recommended should be placed before the Commissioner as representing the views of the Corporation. The suggested arrangements were as follow :—

HARPURHEY WARD (NEW).—This ward to comprise the whole of the Township of Harpurhey and Polling Districts Nos. 40 to 50, inclusive, now forming part of St. Michael's Ward, in the Township of Manchester, and to return three new members to the City Council.

ST. MICHAEL'S WARD (REDUCED).—This ward as reduced will consist of Polling Districts Nos. 31 to 39, inclusive. Under the Act the present Councillors for St. Michael's Ward continue to represent such ward when reduced.

BRADFORD WARD (NEW).—This ward to consist of the whole of the Township of Bradford and of the Township of Beswick (Polling Districts Nos. 88 and 89 in Ardwick Ward), and to return three new members to the City Council.

ARDWICK WARD (REDUCED).—This ward to consist of Polling Districts Nos. 79 to 87, inclusive. Under the Act the present Councillors for Ardwick Ward continue to represent such ward when reduced.

RUSHOLME WARD (NEW).—This ward to consist of the Local Board District of Rusholme, and to return three new members to the City Council.

The Commissioner, having heard all the evidence, prepared a scheme in which were defined the boundaries of the new wards, and of the reduced wards of St. Michael's and Ardwick. This was submitted to one of Her Majesty's Principal Secretaries of State, as required by the Act, and was subsequently confirmed by an Order in Council. It, in effect, confirmed the arrangement recommended by the Incorporation Sub-Committee. The several Committees of the Council thereupon received instructions to take such measures as might be requisite for carrying on the work of the three new wards, on and after the 30th September, 1885. The first election of councillors for these new wards took place on the 1st of November following. The first elected representatives of Rusholme were Messrs. F. E. Estcourt, W. T. Gunson, and J. Ramsay ; of Harpurhey, Messrs. G. Needham, W. Sherratt, and J. Richards ; and of Bradford,

Messrs. E. Williams, J. Tunstall, and J. Hutt. On the 9th November, aldermen were assigned to the new wards as follows:—Rusholme, Mr. Philip Goldschmidt; Bradford, Mr. Hugo Shaw; Harpurhey, Mr. William Griffin.

The only matters remaining for settlement were the claims of certain officials of the former Local Authorities and the claims of the county justices, in respect of their loss by reason of the passing of the City Extension Act. The former were, after much discussion, arranged; the latter also were ultimately arranged by the Council agreeing to pay £6,000 under Section 10 of the Act, and a further sum of £86. 11s. 10d. yearly under Section 12, being the proportion of a pension of £833. 6s. 8d. per annum granted to Sir John Iles Mantell, late stipendiary magistrate of the Manchester division. At a meeting of the Committee on the 27th July, 1886, a special resolution of thanks was passed to the Mayor (Alderman Goldschmidt) for his services in settling the claims under the Manchester City Extension Act.

The next chapter in the history of City extension opens with a resolution which was moved by Alderman Sir John J. Harwood at a meeting of the General Purposes Committee on the 29th November, 1888, and confirmed by the Council on the 5th December following. It was as follows:—

That in view of the early formation of the new County Councils under the Local Government Act, 1888, and the contemplated legislation as regards District Councils, the time has arrived when the question of amalgamating the districts adjoining the City with Manchester as one municipality and county should receive the serious consideration of all interested. That as any delay will seriously increase the difficulties, other obligations and relationships will have to be entered into, and it is obviously important that no time should be lost in determining these matters in one way or the other, it is desirable that a special Sub-Committee be now appointed with considerably extended powers in relation to this subject, and that they be authorised to consider all communications which have been or may be received in reference thereto, and to take such action in the matter as in their opinion may be expedient and desirable. That such Sub-Committee consist of the Chairmen of all the Standing Committees of the Council, together with Alderman Windsor, Councillors Hoy, McDougall, Rawson, Schou, Southern, and Williams.

Sir John Harwood said that by the words “extended powers,” he meant that if they should come to the decision that they would be justified in asking the Local Government Board to send down a Commissioner to inquire into the matter, they should have power to

do so. In indicating his reasons for moving the resolution, he might say that they had received a precept from the School Board last year for £38,000. In the Manchester schools there were 5,111 children whose parents did not live in the City. It therefore came to this: that taking the 32,000 children in the Board Schools at a cost of £38,000 per annum, and then calculating the 5,111 whose parents paid no rates, it was fair to assume that those children cost the rate-payers of Manchester very nearly £6,000 a year. At the Central Board School, in Deansgate, which was the most expensive school of all, more than half the scholars came from the out-townships. As regarded the Free Libraries, 15,589 volumes were taken out yearly by borrowers who did not contribute in any way to the rates. In addition to that number, there were the people who came from the out-townships to the Reference Library, in King Street. Those persons were relieved from taxation in regard to education, and in regard to library accommodation, in a way which was perfectly indefensible. In addition, Manchester had spent three and a half millions sterling in providing water, and without profit. The City provided water of very excellent quality. Clearly if they in Manchester pulled down a large number of unhealthy dwellings in order to remove causes of disease, the people thus disturbed must take refuge in the out-districts.

The seconder of the resolution (Councillor Hoy) said that if they had a less rate in the outlying districts at present, it was because they were not supplying the proper conveniences of local government.

The resolution was unanimously passed by the Council. The Committee, immediately upon its appointment, received communications from various out-townships applying for terms of incorporation. Negotiations followed extending over the whole of 1889, and the ultimate result was a very considerable extension of the area of the City. Without following those negotiations through all their ramifications, it may be sufficient to state, generally, that at an early stage the districts of Crumpsall, Newton Heath, Blackley, Moston, Openshaw, and the Hamlet of Clayton showed a disposition to join the City; and on the 24th October the Sub-Committee reported to the General Purposes Committee the progress made.

The report was approved by the General Purposes Committee at a meeting on the 24th October. Sir John Harwood, in moving its adoption, said everybody who looked at the case of Moss Side without prejudice must see that it would be a very desirable thing indeed for that district to be united with Manchester. Its area was small, and the interests of its people and those of the City were identical. Manchester had no sordid motive in desiring to take in Moss Side. He believed the advantage to the township would grow every year.

In addition to the townships mentioned in the report, Failsworth at a later date showed a disposition to join Manchester. The first expression of a desire in this direction was given at a public meeting of the ratepayers of the township held in November, when it was resolved :—

That this meeting expresses its opinion that it is desirable to amalgamate with Manchester.

Discussions at the Local Board showed that that Authority was divided in opinion as to whether the township should seek union with Manchester or Oldham, or remain independent. After much discussion both at the Local Board and at public meetings, it was decided to make application to Manchester. The application was received in due course by the Amalgamation Sub-Committee, and though it was at first regarded favourably, difficulties presented themselves upon consideration—mainly as to the possibilities of effectively dealing with the sewage—which made it undesirable, as far as the City was concerned, to take in this outlying township. As regards Stretford, the opinion expressed by the Amalgamation Sub-Committee gave strength to the prevailing feeling in the Council that that township, or such portion of it at least as was immediately contiguous to the City—namely, the Old Trafford district—should be included in the scheme. With the sanction of the Council, the Sub-Committee decided that this should be done. They had instructions from the Council to make final arrangements in relation to the scheme, and to authorise its alteration or modification in any respect, and were empowered to affix the corporate seal to any document or documents expressing their final decision. This determination, however, seemed likely to provoke strenuous opposition on the part of the Stretford Local Board; and, no doubt on account

of this, the Sub-Committee made a representation to the Council on the 1st February, 1890, in which they said :—

The Sub-Committee have had under their consideration the subject of the modification of the scheme, and they have, under all the circumstances, determined that the townships or districts of Failsworth and Stretford be omitted from their present scheme, and have communicated this resolution to those townships and also to the Local Government Board.

As regards Gorton, the Local Board of which district also threatened opposition, a satisfactory arrangement was, after much negotiation, entered into, but upon a poll being taken it failed to receive the sanction of the ratepayers of the township. In the first instance, the Local Board approached the Committee with a series of questions as to the terms which would be granted to the township in the event of its agreeing to amalgamate.

On the 2nd October, 1889, the Clerk of the Board wrote to the Town Clerk, informing him of the fact that a poll had been taken on the question of amalgamation with Manchester. "The result," he said, "was against joining with Manchester. This being the case, my Board are now taking energetic steps to comply with the Rivers Pollution Act, 1876."

It appeared, upon examination of the voting, that whilst the Town Hall and St. James's Wards showed a preponderance against amalgamation, the other wards—namely, St. Clement's (Longsight) and St. Mark's, which were nearest to the City boundary—were largely in favour of amalgamation.

In these circumstances the matter was allowed to proceed, Gorton being retained in the scheme of City extension, together with Kirkmanshulme. Negotiations between the Local Board and the Corporation were resumed some months later, and the result appears from the following resolution, passed by the Local Board on the 15th January, 1890 :—

The Amalgamation Committee of the Manchester City Council having offered to this Board a differential rate of 2d. in the pound, or equal to an allowance of five per cent. on the net rateable value for a period of ten years, and during the same period to allow a discount of 75 per cent. on all farms, lands, canals, railways, reservoirs, &c., according to the Public Health Act, 1875, and also having confirmed their previous promises, as stated in their printed answers to questions put to them by this Board, and having also agreed to conform with all arrangements this Board may have made, this Board hereby resolves to accept the above terms, and recommends the owners and ratepayers of the township to endorse its action and to amalgamate with Manchester.

* This resolution was accepted by the Amalgamation Sub-Committee as satisfactory. In spite of the arrangement, however, there remained much local discontent.

Meetings of the opposing parties were held in different parts of the district, and it was noted that those in St. Mark's and St. Clement's Wards were uniformly in favour of amalgamation.

A second vote took place, the result of which was reported to the Local Board on the 28th February, as follows :—

In favour of Amalgamation	2,387
Against	2,483
Majority against	96

The effect of this was to place Gorton, after all, in the category of opponents of the amalgamation scheme. The only other serious opponent among the Local Boards affected was Moss Side, which had maintained an uncompromising attitude from the first. Opposition developed, however, from another and an unexpected quarter, namely, the Lancashire County Council. The Parliamentary Committee of this Council prepared a report, showing the effect which the proposed extensions of Manchester, Liverpool, Oldham, and Bolton would have upon the county, and communicated resolutions passed by them to the Local Government Board. The most important of these resolutions was that "under any circumstances the fullest information should be given at the local inquiry with regard to the policy or desirability of so large an extension of municipal government; that every consideration should be given to the wishes of the authorities and inhabitants of the districts proposed to be included; and that if it should be determined to adopt any part of the scheme, clauses should be inserted in the Provisional Order giving the fullest and amplest compensation to the county for loss not only of rateable value, but also of the share of the proceeds of the local taxation account which must necessarily be caused by the transfer of so large an area of rateable property from the county to the County Borough of Manchester." The Amalgamation Sub-Committee expressed the strongest dissent from these views.

Another opponent appeared in the Corporation of Middleton, who wanted a part of Blackley Township to be added to that borough.

With regard to the consenting districts, the following were briefly the suggested arrangements:—

NEWTON HEATH (Local Board District).—General provisions analogous to those of the Manchester Extension Act, 1885, to be applicable. The township to be divided into two wards, to be defined by the Commissioners upon the inquiry, it being left to the representatives of Newton Heath, in the first instance, to suggest the boundaries of the wards. Each ward to have three councillors and one alderman; the first aldermen to be nominated by the first six councillors from amongst themselves, the Council agreeing to confirm such nomination. The Council agreed to a clause not to construct any sewage works in the district of Newton Heath, and to include the treatment of the township's sewage in their scheme. As regards farm lands, the Public Health Act, section 211 sub-section 1 (*b*), to continue applicable for ten years; at the expiration of that time the subject to be again considered.

CRUMPSALL (Local Board District).—To be made a separate ward, with three councillors and one alderman; the first alderman to be a Crumpsall ratepayer.

BLACKLEY (under the jurisdiction of the Rural Sanitary Authority of the Prestwich Union).—The ratepayers having accepted the principle of incorporation with the City, the Corporation suggested that this township should be annexed to another ward.

MOSTON (under the same authority as the preceding).—The ratepayers having accepted the principles of incorporation, it was agreed that the question of representation should be left in the hands of the Commissioners upon the inquiry, the impression being that Moston and Blackley should be combined in one ward.

CLAYTON (under the jurisdiction of the Rural Sanitary Authority of Ashton-under-Lyne).—To be annexed to Bradford Ward, and form part thereof.

OPENSHAW (Local Board District).—To be made a separate ward, with three councillors and one alderman; the first alderman to be elected from representatives of Openshaw. The township to have a differential rate of one shilling in the pound for ten years. (The reason for this was that the township, which is of small area, and

contains very large works, was in excellent condition as to roads, &c., and was fully equipped, with baths in progress and a library presented to it free of expense. The rates, too, were exceptionally low, the property being of excellent rate-producing quality, and the administration of the district would not be costly. The case of Openshaw differed altogether from that of any other township to be incorporated.)

The following table shows the effect upon Manchester of the scheme of incorporation, if it could have been carried out in its entirety :—

Township or District	Area in Acres	Estimated Population	Rateable Value (to Poor Rate)
			£
Newton Heath	1,350	31,000	101,545
Crumpsall	733	10,500	39,672
Blackley.....	1,840	7,210	19,444
Moston	1,297	4,300	17,368
Clayton	477	2,600	11,550
Openshaw	579	20,000	81,592
	6,276	75,610	271,171
Gorton	1,484	40,000	106,544
Kirkmanshulme	235	2,800	14,049
Moss Side	420	23,500	102,716
	8,415	141,910	494,480
City of Manchester	5,927	378,800	2,416,330
	14,342	520,710	2,910,810

The inquiry on behalf of the Local Government Board was held at the Manchester Town Hall on February 24th, 1890, and following days, before Major-General Carey, of the Royal Engineers, and Edmund P. Burd, Esq. Mr. Addison, Q.C., M.P., and Mr. Hopkinson represented the Corporation. The opposing Authorities were represented—Gorton Local Board (described as a semi-consenting Authority) by Mr. Bidder, Q.C., and Mr. Yates; the Lancashire County Council, Mr. Higgin, Q.C., and Mr. Fitzgerald; Moss Side Local Board, Mr. Higgin, Q.C., and Mr. G. W. Heywood; the Lancashire and Yorkshire, London and North Western, Manchester Sheffield and Lincolnshire, and Midland Railway Companies, Mr. Higgin, Q.C., and Mr. A. la Trobe Foster; Middleton Corporation,

Mr. Yates. The consenting Authorities and likewise certain interested parties were also represented. It was urged by Counsel representing the Corporation that, as to the consenting districts, they desired to form part of the City with which they were already very intimately connected by business and other ties. Manchester was incorporated by Charter in October, 1838. The City had then an area of 4,293 acres, comprising six townships, and so it remained until 1885, when the Act was passed taking in Bradford, Harpurhey, and Rusholme; thus adding to the area 1,634 acres, 32,149 inhabitants, and £138,595 to the rateable value. Although Manchester was the third City in the kingdom after London, in population—Birmingham and Liverpool having each a larger population—it held the sixteenth place in point of acreage. Always excepting Liverpool, it had the largest percentage of population to acreage, a circumstance which in itself was a strong argument in favour of Parliament granting the City room for extension and increased breathing space for the population. Before the extension in 1885, the population of the City was $79\frac{1}{2}$ to the acre; the addition of the three townships reduced it to $63\frac{3}{4}$. The eight townships and one hamlet now proposed to be added contained an area of 8,415 acres, and an estimated population of 141,910. The City, if extended so as to embrace these, would have a population of 36 to the acre. There would thus be room for considerable expansion. The Corporation of Manchester provided these out-townships already with the more important requisites of modern comfort in gas and water, but it would be neglecting an important duty if it allowed the small communities which grew up outside the City boundaries to go on arranging themselves according to local exigencies, until the day came when its own and their difficulties forced it to take them in hand, encumbered with gigantic evils. If amalgamation would be good for the City, it would be equally good, and in the end more beneficial, for the out-townships—a fact which was abundantly brought out by evidence in the course of the inquiry.

But whilst desirous of extending the City boundaries, the Corporation were at the same time most unwilling to exercise undue pressure. They preferred rather to proceed on the basis of a mutual arrangement in every case; and if, as regarded Moss Side, they had an unwilling authority to deal with, the circumstances of that township were so peculiar that practically the Corporation had no alternative but to

include it in their scheme. A passage in the report of the Glasgow Commission expressed exactly the attitude of the Manchester Corporation, and the principles on which they desired to proceed. The report said :—

Is it desirable to place under one municipal government an area having a population closely approaching 750,000? Although the question cannot occur in more than two or three other instances in the United Kingdom, it is one of the highest importance, not only to the masses of the people directly affected by it, but also to the nation at large. After most careful consideration we have come to the conclusion that, proper provisions being made for divisional administration, it would not only be convenient, but just, that a continuous urban area, with a population even exceeding 750,000, if knitted together by community of interests and reciprocity of duties amongst its different parts, should, for the raising and administration of revenue and the protection of life, property, and health, be placed under one supreme municipal authority elected by the ratepayers of the whole area.

Evidence was given by Mr. Hulton, Clerk to the County Council, to the effect that there were at present pending four schemes for the extension of borough boundaries in Lancashire: Bolton and Manchester proceeding by way of Provisional Order, and Liverpool and Oldham by way of Bill. The rateable value Bolton proposed to acquire was £91,000, Manchester £507,208, Liverpool £320,600, and Oldham £200,000; a total of £1,118,808. If the Manchester extension scheme were granted, he said, five county electoral divisions would be annihilated. If the electoral divisions were altered there was no legal authority to make the alterations that would be necessary in the voters' list. The police force of the county would have to be reduced by 103 men, whilst the headquarters staff would have to be maintained as it stood. Great importance was attached to the question of equitable distribution between the county and county boroughs under Section 32 of the Local Government Act, which provided for an equitable distribution of the proceeds of the local taxation licenses and probate duty grant, and respecting all other financial relations between the county and county boroughs. The Local Government Act, it was explained, had affected Lancashire more than any other county. It had reduced the rateable value from £18,561,534 to £8,468,569. The rateable value of the county boroughs, Mr. Hulton said, exceeded that of the rest of the county.

With regard to the opposing railway companies, their claim was that, in the added districts, there should be an extension in perpetuity of all the effects of the 211th section of the Public Health Act. They had

enjoyed, under that section, an abatement of 75 per cent. on their assessment for rateable purposes, and the question argued before the Commissioners was whether such abatement in respect of the lines within the added districts should be in perpetuity or for a term of years.

The Order of the Local Government Board was issued on the 10th June, 1890. The most important provision was in Article III., by which the boundary of the City was so altered as to include, in addition to the area of the existing City, the following areas, namely: the Local Government District of Crumpsall, the Local Government District of Newton Heath, the Local Government District of Openshaw, that portion of the Gorton District known as St. Mark's and St. Clement's Wards, the contributory places of Blackley and Moston, the contributory place of Kirkmanshulme, and the contributory place of Clayton—the whole of the area within such altered boundary to be for the purposes of the Municipal Corporation Act, 1882, and for all other purposes the City and County Borough. Thus Moss Side, as well as two of the wards of Gorton (Town Hall and St. James's) which upon the poll had declared against amalgamation, were omitted from the scheme. The jurisdiction of the Court of Quarter Sessions, Recorder, Clerk of the Peace and Coroner of the existing City, as well as the Salford Hundred Court of Record, the Justices of the Peace and City Stipendiary Magistrate, and the Police Constables and other peace officers of the existing City, were by Article V. extended and made applicable throughout the City. Article VII. ordered that the number of Councillors of the City should be increased from 57 to 78, and the number of Aldermen from 19 to 26. As to wards, Article VIII. directed that, subject to the provisions of the Municipal Corporations Act, the following arrangements should take effect:—

1. The City to be divided into 25 wards.
2. Clayton to be added to the existing Bradford Ward.
3. Subject to the provision respecting Clayton, the eighteen existing wards of the City, and the number of councillors apportioned to each, to remain unaltered.
4. The added areas (exclusive of Clayton) to be divided into seven wards, as follows:—Crumpsall Ward, Newton Heath Ward, Miles Platting Ward, Blackley and Moston Ward, Openshaw Ward, Saint Mark's Ward, and Longsight Ward.
5. Three councillors to be assigned to each of the new wards.

Articles IX. and X. provided for the elections of councillors and aldermen for the added wards. Subsequent articles provided for the

extension and continuance of all existing local Acts, &c., and of all bye-laws and regulations of the Corporation, for compensation to officers of the extinguished Local Boards of Crumpsall, Newton Heath, and Openshaw, for the liquidation of current debts, and other matters. The property and liabilities of the Crumpsall School Board were transferred to the City School Board. The Newton Heath and Miles Platting Wards, the Openshaw Ward, the added part of Gorton, together with Blackley, Clayton, Kirkmanshulme, and Moston, were exempted from the School Board rate of the City "until such time as school accommodation is required in such areas respectively, and has been provided by the City School Board." The members of the County Police Force in the added districts might by agreement be transferred to the City Force, with continuance of existing emoluments. Police Stations likewise to be transferred upon payment by the City Council to the County Council of a sum to be agreed upon, or in default of agreement, to be settled by arbitration. County officers to be compensated if pecuniarily affected by the Order. An equitable adjustment respecting the distribution of the proceeds of the local taxation licenses and probate duty grant, and all other financial relations and questions between the County of Lancaster and the City which might be affected by the extension of the City, to be made by agreement within six months, or, failing agreement, to be settled by the Local Government Act Commissioners. Agricultural land to be rated for sanitary purposes in the proportion of one-fourth part only of the full net annual value. For a period of ten years, Openshaw Ward to have a differential rate of one shilling in the pound, the added part of Gorton a differential rate of twopence, and the contributory place of Kirkmanshulme a differential rate of sixpence in the pound. Arrangements with the local authorities as to privies and ashpits were confirmed.

Article XXVI. reconstituted the Gorton Local Board District, the same to be divided into two wards (Town Hall and St. James's) coterminous with the existing wards bearing those names. Article XXVII. provided for an adjustment of financial relations between the City and Gorton Local Board.

In all the negotiations conducted during the two years of Alderman Mark's mayoralty, he rendered able and valuable assistance, especially

in regard to the settlement of claims by persons whose offices were abolished as a consequence of the new arrangements.

A Bill was promoted in due course, and on the 14th August, 1890, the Amalgamation Sub-Committee were able to report as follows:—

The Provisional Order introduced by the Local Government Board has now been confirmed by both Houses of Parliament, and awaits the Royal Assent. In the House of Commons there was opposition on the part of Gorton and the Lancashire County Council. After a hearing of four days' duration the Select Committee, consisting of the Right Hon. James Stansfeld, M.P. (Chairman), Mr. Richard Chamberlain, M.P., Mr. J. Blundell Maple, M.P., and Mr. Arthur Williams, M.P., gave the following decision:—

The Committee have come to a unanimous decision. They have decided in favour of the proposed extension. They are not of opinion that outer Gorton has a claim under the circumstances, whilst remaining outside the City of Manchester, to drain into its sewage system. They see no sufficient reason for postponing the coming into operation of the Order, or for modifying the compensation clause, further than they have already suggested. Should it be thought advisable by outer Gorton, they would be disposed to accept a clause enabling it to come in on the same terms with regard to rating as the part annexed if they should ultimately so desire, and within a limited period. We do not define the period; we leave that for the consideration of outer Gorton. In that case, if outer Gorton were to think it was of any value to them to give them time for consideration they will bring up a clause.

Upon this the Gorton Local Board accepted the clause offered by the Committee, and withdrew from further opposition. [The clause gave outer Gorton the option of joining the City, subject to order of the Local Government Board, provided application were made before January 1st, 1891.]

The opposition of the Lancashire County Council was renewed in the House of Lords, and resulted in the complete rejection of their claims, after full consideration, extending over two days, before a Select Committee consisting of the Marquis of Waterford (Chairman), the Duke of Buccleuch, Earl Mayo, Lord Clarina, and Lord Ranfurly.

It is now necessary to make provisions as to polling districts for municipal purposes in the added portion of the City. It is also found requisite to alter the parliamentary polling districts in Newton Heath, so that they may coincide with the municipal polling districts. The forms of order prepared by the Town Clerk for these purposes will be submitted to the Council.

The Bill received the Royal Assent on the 18th August, 1890, and the Act came into full operation on the 9th November, 1890.

Subjoined is a statement, in tabular form, showing the position of the City as to area, population, and rateable value before and after the extension of 1890:—

CITY OF MANCHESTER.
STATEMENT SHOWING THE NET ANNUAL VALUE OF THE BOROUGH (NOW CITY) IN 1838, 1841, 1851, 1861, AND IN EACH YEAR FROM 1871 TO 1893, TOGETHER WITH THE
PRESENT AREA AND POPULATION AT THE CENSUS OF 1891.

Year	NAME OF TOWNSHIP										NAME OF TOWNSHIP										Total
	Manchester	Chorlton-upon-Medlock	Milnrow	Ardwick	Cheetham	Breck	Bradford	Harpurhey	Hushwood	Moat-side	Withington	Blackley	Crompton	Liverpool	Ston	Newton	Newton	Newton	Newton	Newton	
1839	478,618	86,844	42,422	35,666	35,719	685															608,544
1841	575,580	117,495	62,298	38,498	32,485	1,228															828,582
1851	679,988	129,686	116,748	42,645	22,019	1,781															1,052,872
1861	810,745	148,083	148,797	53,829	67,610	2,257															1,252,941
1871	1,135,137	198,983	189,842	79,253	95,946	5,986															1,768,621
1872	1,170,927	207,603	197,632	80,987	96,883	6,881															1,768,621
1873	1,193,927	215,603	207,777	88,127	99,379	6,916															1,768,621
1874	1,222,241	228,083	207,037	90,659	101,110	10,901															1,802,120
1875	1,202,801	228,417	216,881	95,984	105,418	12,824															1,802,120
1876	1,411,004	250,907	236,881	109,549	111,088	13,850															1,972,285
1877	1,479,078	266,907	238,681	111,839	118,394	14,844															2,122,186
1878	1,503,890	272,824	246,624	112,698	124,272	16,157															2,270,247
1879	1,507,010	276,454	247,116	112,698	127,372	17,210															2,270,247
1880	1,502,951	278,116	247,626	121,284	128,580	17,776															2,262,002
1881	1,502,917	278,549	248,938	124,916	128,823	18,114															2,262,002
1882	1,502,917	278,549	248,938	124,916	128,823	18,114															2,262,002
1883	1,497,834	272,018	248,748	122,211	128,313	18,406															2,262,002
1884	1,481,182	262,510	248,748	122,211	128,313	18,406															2,262,002
1885	1,500,609	277,618	247,686	124,400	131,099	19,272															2,262,002
1886	1,499,106	274,536	247,686	124,400	131,099	19,272															2,262,002
1887	1,504,683	271,737	247,148	124,500	131,015	20,104															2,411,009
1888	1,510,144	270,391	246,554	127,766	134,703	20,510															2,411,009
1889	1,500,747	270,595	246,468	127,400	134,164	20,514															2,411,009
1890	1,497,171	271,326	246,751	127,699	137,967	20,833															2,421,470
1891	1,492,956	274,175	247,320	132,090	138,945	20,998															2,421,470
1892	1,498,639	270,039	246,894	132,206	139,345	21,047															2,421,470
1893	1,498,588	269,689	247,556	132,800	140,331	21,077															2,421,470
Area In Acres	1,646	646	477	509	919	96	288	193	974	38	147	1,840	733	605	336	1,297	1,360	235	841	12,911½	
Population (Census of 1891)	148,100	59,620	71,968	35,021	29,590	9,691	19,961	8,360	10,006	668	1,000	7,332	10,371	3,328	25,992	5,179	34,005	2,829	23,197	205,308½	

(*) Included in City by City Extension Act, 1886. (†) Included in City by City of Manchester Order, 1890. (‡) Estimated Population, 1893 - 515,000.



Manchester a County Borough.

.....

The Local Government Act, 1888, and its effect upon the City.

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THE introduction of the Local Government Act was an event to which the City Council had looked forward with much interest, and so early as the 3rd March, 1886, they appointed a Committee to watch the measure in its passage through Parliament. They also represented to the President of the Local Government Board the desirability of inserting clauses for extending the area of boroughs by means of Provisional Orders, to be made by a Government Department, and confirmed by Parliament.

Early in the year 1888 the Council were in possession of the Bill, and adopted a resolution to the effect that they regarded the proposed legislation as being generally satisfactory. They also expressed gratification at finding that effect was given to their request, and that the Local Government Board were to be authorised to extend municipal boundaries by Provisional Order. The measure was an unqualified advantage to the City of Manchester, which thereby became quite independent of the county administration, and self-contained by being created a County Borough. It is needless to follow the Bill through its various stages, although many points of interest arose, and much labour was entailed upon members of the Corporation. All that can be here attempted is a brief description of the measure in its application to Manchester.

The Act contains a provision under which the Local Government Board are empowered to frame a scheme for transferring to the County Council (including in that term a County Borough) the powers of an administrative character exercised in matters arising within the district

by Her Majesty's Privy Council, a Secretary of State, the Board of Trade, the Local Government Board, or the Education Department (section 10). This provision affirms the principle of decentralisation, and it may be hoped is not destined to be unproductive in the future, although no action has hitherto been taken under it.

The Local Government Act also provides for placing in the hands of the County Councils and County Boroughs, in lieu of the former Exchequer grants, increased contributions out of imperial taxation by devoting to each county the revenue arising therein from local taxation licences, and also a certain share in the probate duty of the United Kingdom.

The duty of apportioning these contributions between the administrative counties and the county boroughs was delegated to a Commission presided over by the late Earl of Derby, and the ascertainment of the share of Manchester was a work of arduous contest, resulting, however, in an award in relation to the Manchester City Council to a large extent upon the basis contended for on their part. This payment extinguishes a variety of local grants previously made by the Government, the largest of which was the contribution to police expenses, and it now devolves upon the county borough to make those payments in addition to others chiefly connected with the poor law administration, which are set out in the 24th and 26th sections of the Local Government Act. The surplus is to be applied in aid of the City rate, and amounted last year to £8,969.

The financial gain to Manchester cannot be measured solely by the surplus thus accruing, as the payments for poor law purposes above referred to effect a considerable reduction in the poor rate.

The discontinued Exchequer grants amounted in the year prior to the passing of the Act to £54,661 in respect of the area of the City as extended in 1890.

The amount paid by the Local Government Board to the City Council out of the local taxation account, in respect of the local taxation licences and probate duty grant for the financial year ending 31st March, 1893, was £100,068, being an increase of £45,407 over the grants made in the year prior to the passing of the Act.

The Act further provides that all liability to contribute towards county expenses should cease, and that an equitable adjustment of financial relations should be made by agreement, or, in default of agreement, by the Commission appointed for the purpose. The claim of the County Council under this head amounted to £77,550, and was finally settled by agreement at the sum of £42,000, with a continuing annual payment of £99 in respect of cost of assizes, &c.

Consequent upon the extension of the City in 1890, a further adjustment with the County became necessary with reference to the added area. The sum originally claimed by the County was £159,157 and the award of the Commission amounted to £76,060.

The Local Government Act also vests in the City Council the licensing of houses or places for the public performance of stage plays, and the control of the county and hundred bridges within the City and their approaches.

While, on the one hand, the City has been placed in a position of independence, and has redeemed its obligations to the County under the award of the Commissioners, it is satisfactory to record that joint action has been arranged in relation to the following subjects :—

A Joint Mersey and Irwell Rivers Committee of the County Councils of Lancashire and Cheshire and the County Borough of Manchester, and other County Boroughs.

A Joint Rate Committee of the Lancashire County Council and the County Boroughs, and a Joint Board in reference to Lunatic Asylums.

A Joint Committee in reference to the Manchester Assize Courts.

A Joint Fisheries Committee under the Fisheries Act.

This subject cannot be left without an expression of satisfaction at the important and beneficial results to the City arising from the Local Government Act, 1888.





Honorary Freemen of the City.



IN the Session of 1885, Parliament passed an Act which empowered any borough in the United Kingdom to admit as Honorary Freemen persons of distinction, or who had rendered eminent public services to such borough.

The Corporation of Manchester first availed itself of the Act in April, 1888, when, upon Mr. Oliver Heywood assuming the office of High Sheriff of the County, it was determined to pay him a signal mark of respect by electing him the first Freeman of the City, in token of appreciation of his invaluable services to the community, and his great interest in the cause of charity. There were few good objects which did not find in him a generous supporter. In any emergency involving an appeal to public charity, the first person to whom the Mayor was accustomed to turn for counsel was Mr. Oliver Heywood. Institutions for the advancement of learning, and those for the promotion of industry and thrift amongst the people, were alike objects of his solicitude. At the period in question Mr. Heywood held the following honorary appointments :— He was a Member of the Court and Council of the Victoria University ; a Governor and Member of the Council of Owens College ; Chairman of Governors of the Manchester Grammar School ; a Trustee of Chetham's Hospital ; a Governor of the High School for Girls ; a Governor (and Treasurer) of Hulme Hall in connection with Owens College ; President of the Council of the Manchester Technical School ; a Governor of the Cotton Districts Convalescent Fund ; President of the Committee of the Children's Hospital, Pendlebury ; Treasurer of St. Mary's Hospital ; President of the Salford Royal Hospital and Dispensary ; a Member of the Board of the Royal Eye Hospital ; President of the Association for the Promotion of Technical Education ; Treasurer of the District Provident Society, of the Penny Savings Bank Association, of the Provident Dispensaries Association

of Manchester and Salford, of the Sanitary Association, of the Schools for the Deaf and Dumb, of the Sick Poor and Private Nursing Institution, of the Adult Deaf and Dumb Society, and of the Provident Society's Convalescent Home, Southport; Trustee of Clarke and Marshall's Charity, of the Manchester and Salford Boys' and Girls' Refuges and Children's Aid Society, and of various minor Charities; Trustee of the Clifton Hall Colliery Explosion Fund; Vice-President of the Ardwick and Ancoats Hospital; and President of the Pendleton Provident Dispensary.

The desirableness of conferring the Freedom of the City on its most distinguished citizen was mentioned by the Mayor, Alderman (afterwards Sir John J.) Harwood, at a meeting of the General Purposes Committee on the 11th April, 1888. He reminded members that they were enabled thus to honour persons of distinction, "or who had rendered eminent services to the City," and it would be generally felt that Mr. Oliver Heywood fully answered the requirements in that respect of the Act of 1885. It had occurred to the Mayor that during the then approaching Manchester Assizes a fitting opportunity might be afforded for carrying out the suggestion made, and he moved that the matter should be referred to a Special Committee, with power to make all necessary arrangements. The proposal was unanimously and cordially approved by the General Purposes Committee, and endorsed by the Council.

The ceremony of presentation took place at a special meeting of the Council on the 27th April. The resolution conferring the Freedom on Mr. Heywood was emblazoned on vellum, sealed with the corporate seal, and enclosed in a silver casket. The following were its terms:—

*That this Council have for a long period been impressed with the obligations of the Citizens of Manchester to Oliver Heywood, Esquire, and the distinguished family to which he belongs, for their active and zealous participation in all good works affecting the well being of the community. This Council have deemed the occasion of his having been appointed to the important office of High Sheriff of Lancashire a suitable opportunity for giving expression to the feelings of admiration and gratitude which they entertain for his exalted character, and life of public usefulness and benevolence, devoted to the promotion of education and the relief of suffering humanity; for the large share taken by him in the direction of numerous valuable institutions, and for his wise and prudent counsel upon public questions. The Council, in recognition of the numerous services which he has rendered to the City, do hereby, in pursuance of the *Manchester Freedom of Boroughs Act, 1885*, confer upon the said Oliver Heywood, Esquire, the *Honorary Freedom of the City of Manchester*, and hereby admit him to the *Honorary Freedom of the City of Manchester* accordingly.*

Mr. Heywood having subscribed his name as the first on the Roll of Honorary Freeman, the Mayor addressed him in terms of congratulation, and spoke of the honourable traditions of his family—honourable alike in the annals of Lancashire and of Manchester,—and of their great benevolence and public spirit. He referred also in pointed terms to Mr. Heywood's own public and charitable acts, and to the deep obligation under which he had placed the Mayors of this City, during many years, by his constant and welcome counsel.

Mr. Heywood, in his reply, spoke of the presentation to him of the freedom of Manchester as the crowning mark of a more than generous appreciation of such services as he had been able to render to a community in which he had passed a life of happiness and prosperity, and from the members of which he had received continuing and signal proofs of kindly favour. He spoke also of the material and social progress which had marked the half century of Manchester's corporate existence, of its educational advancement, and the great development and usefulness of its medical charities.

A number of guests, including members of Mr. Heywood's family, who had been invited, were entertained, along with the new Freeman, at a banquet at the close of the ceremony.

The gentleman on whom the Freedom of the City was next conferred was the distinguished African explorer, Mr. Henry M. Stanley. The ceremony took place on the 21st June, 1890. The Council assembled at eleven o'clock, and the presentation was made in the Council Chamber, the formal document, suitably engrossed and illuminated, being enclosed in a silver casket. The resolution of the Council was to the following effect:—

The Council desire to express their sense of the distinguished services rendered by Mr. H. M. Stanley to the interests of civilization and commerce by the explorations of Africa which have made his name illustrious. They also desire to record their admiration of the fortitude, skill, and heroism displayed by Mr. Stanley throughout his arduous and perilous enterprises, and to congratulate him upon his return in safety to this country after so long an absence. The Council, in recognition of his eminent services, do hereby, in pursuance of the Honorary Freedom of Boroughs Act, 1885, confer upon the said Henry M. Stanley the Honorary Freedom of the City of Manchester, and hereby admit him to be an Honorary Freeman of the City of Manchester accordingly.

Mr. Stanley briefly replied, accepting the honour conferred upon him; and upon receiving addresses from the Manchester Chamber of Commerce, from the Manchester Geographical Society, and from the Manchester and East Lancashire Auxiliary of the Church Missionary Society, addressed the meeting at greater length. Later in the day Mr. Stanley was entertained at luncheon at the Town Hall, a select company being invited to meet him.

Alderman Heywood, "the Father of the City Council," was presented with the Honorary Freedom of the City on the 27th November, 1891. For seventy-two years Alderman Heywood's life had been associated with the history of Manchester, and for the long period of fifty-five years he had taken part in the Government of the City. He was one of the few Commissioners of Police who advocated the Charter of Incorporation, because he felt that it would be to the advantage of Manchester to have popular representation. In the struggle to obtain that Charter he bore a large share. Under municipal government he had worked to make Manchester a model City. His activities were for nearly fifty years thrown into the work of the Highways Department, and he was largely interested in the movement which led to the building of the new Town Hall, with the formal opening of which, upon its completion (September, 1887), he was honoured by his colleagues of the Council during his second Mayoralty. The resolution conferring upon him the Honorary Freedom of the City was in the following terms. After recalling the fact that Mr. Heywood was a member of the Board of Commissioners of Police which preceded the Corporation, that he occupied the unique position of having served the municipality for upwards of half a century with laborious and conscientious discretion and great ability, and that he had on two occasions been Mayor of the City, it proceeded:—

On the 14th January, 1864, Alderman Heywood was appointed Chairman of the Committee charged with the construction of the present Town Hall, and was concerned in the selection and acquisition of the site, and the erection, furnishing, and opening of the edifice, with which his name will always be associated. For forty-seven consecutive years he has occupied the position of Chairman of the Paving, Sewering, and Highways Committee. There are many other departments in the operations of which he has actively participated; and at all times his sound judgment and long experience have been available for the guidance of the Council and the

efficient conduct of public affairs. By these invaluable contributions to the government of the City, Alderman Heywood has earned the respect and high personal regard of his colleagues, who rejoice that his powers have been restored after a serious illness, and that he is thus enabled to continue his valuable exertions for the public benefit.

The resolution, engrossed and illuminated, was enclosed in a casket of silver, ornamented with municipal emblems, and bearing an appropriate inscription.

Alderman Heywood's reply, which was of some length, was filled with reminiscences of the Manchester of fifty years ago, and most interesting fragments of his personal history. The Alderman, with a number of invited guests, including Earl Spencer, Sir William H. Houldsworth, Bart., M.P., and Sir Edward W. Watkin, Bart., M.P., was entertained at a banquet in the evening in the Banqueting Room of the Town Hall.

The Act of 1885 was next taken advantage of to confer the Honorary Freedom of the City upon Mr. Thomas Ashton and Mr. James Jardine, two gentlemen long and honourably associated with the commercial life of the City, as well as with its educational and charitable institutions. Mr. Ashton was the leading spirit in reforming the administration of Hulme's Charity, by which valuable assistance was secured to the Owens College, the Girls' High School, and other establishments, and which led to the foundation of the Oldham Grammar School and of the Hulme Grammar School, Alexandra Park. His interest in and labours on behalf of Owens College were unceasing. He watched and nursed it in its infancy, succoured it as it grew, and when it had reached the pinnacle of success he still remained its faithful supporter and firm friend. Through his exertions a large amount of the money for the new buildings was collected. In the crowning distinction subsequently obtained of a Charter for the Victoria University, Mr. Ashton found a large reward for his distinguished, long-sustained, and successful labours. He co-operated with Cobden and Bright in securing cheap food for the people by the repeal of the Corn Laws; and at the time of the Cotton Famine in Lancashire, brought about by the American Civil War, he aided, both by his purse and by personal effort, the work of the Cotton Famine Relief Committee in ameliorating the distress throughout the manufacturing districts. He was High

Sheriff of Lancashire in 1883. These and other public services, no less than his high standing in the commercial world, and the respect in which he was held by his fellow-citizens, fully entitled Mr. Ashton to the distinction of being made an Honorary Freeman of Manchester.

The special resolution of the Council relating to Mr. Ashton referred to the sustained interest manifested by him in the Owens College and Victoria University, the influential part he had taken in the administration of Hulme's Charity, and his honourable and active participation in all the public movements of Manchester. "In conclusion," the resolution said, "the Council remember that Mr. Thomas Ashton is one of the few survivors of the group of illustrious men who made such successful efforts to grapple with the serious crisis occasioned by the Cotton Famine, and also that he took an active part in the Manchester Art Treasures Exhibition of 1857." In recognition of these services it had been resolved to admit him to be an Honorary Freeman of the City.

Mr. James Jardine, who had risen from a comparatively humble position to be one of the manufacturing princes of Lancashire, was not less entitled to the like honour. Having mills in Ancoats, his large sympathies were enlisted on behalf of the industrial population of that crowded district. He became a large supporter of the Ancoats Hospital, and fitted-up and endowed a number of beds. He contributed also to the support of other institutions and charities, including St. Mary's, the Clinical, and the Children's Hospitals. He built the south porch of the Manchester Cathedral during the restoration, supplied the funds for placing in St. Ann's Church a memorial window to Bishop Fraser, and was a liberal supporter of Owens College. In the work of the Manchester and Salford Savings Bank he took especial interest, and he advocated and influenced the establishment of branch banks in various parts of Manchester. In addition to his other functions, he held one of the foremost commercial positions in the City as Chairman of the Royal Exchange.

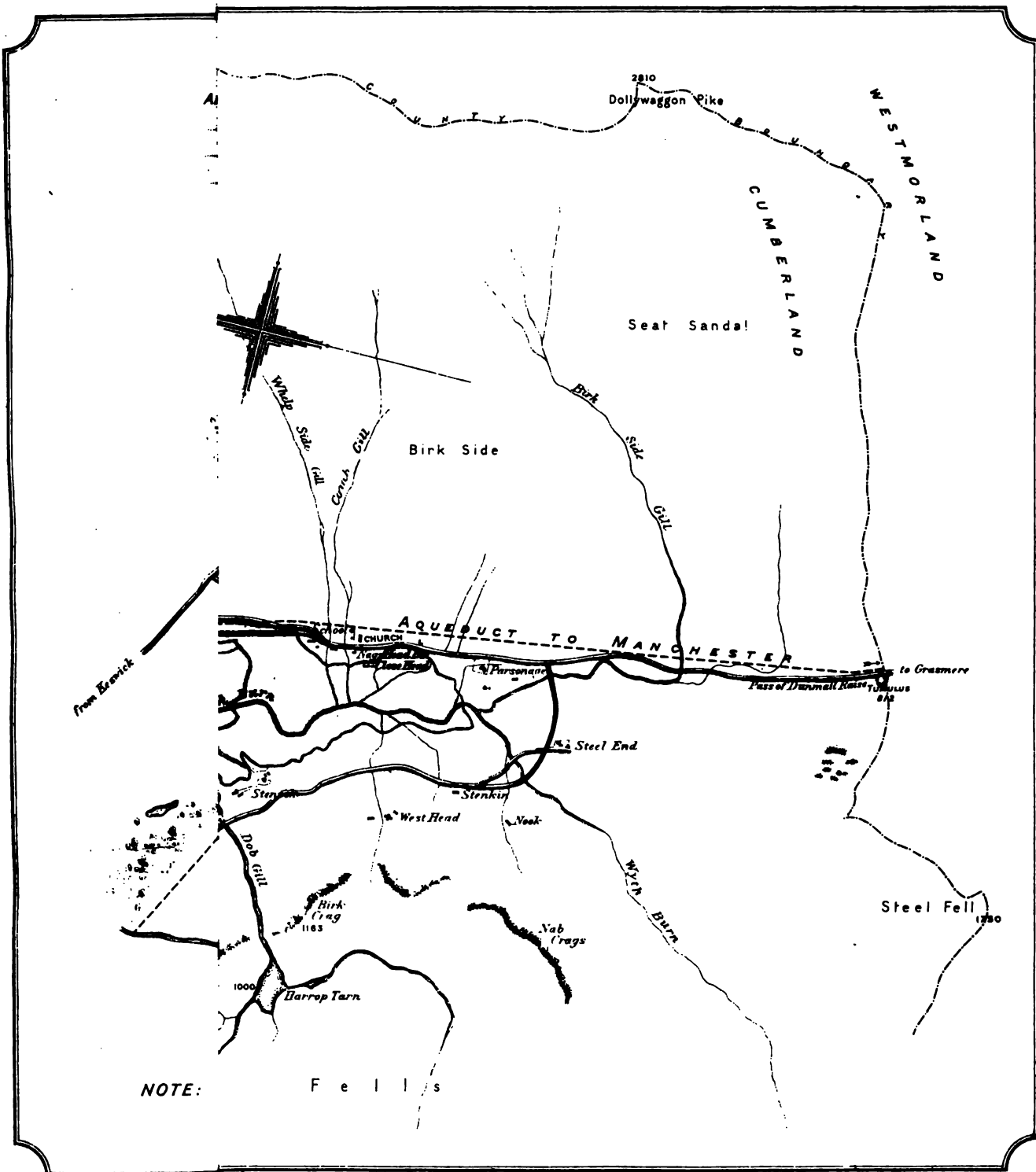
The resolution with regard to Mr. Jardine spoke of his high commercial position, and continued: "Mr. Jardine has also been distinguished by the great interest manifested and liberal support

given by him in regard to all movements having for their object the benefit of the community and the relief of suffering humanity." Special reference was made to Mr. Jardine's generosity in providing and endowing a new wing to the Ancoats Hospital. "Upon all occasions," it was added, "when the advice and co-operation of leading citizens have been required upon matters of public importance, the counsel and support of Mr. Jardine have been readily accorded, and have proved to be of great value." In recognition of these eminent services, the City Council had determined to admit him to be an Honorary Freeman of the City.

The resolutions, enclosed in caskets of remarkably tasteful design, and beautifully executed, were received and fittingly acknowledged by Mr. Ashton and Mr. Jardine respectively; and at the close of the ceremony both gentlemen were entertained at luncheon in the Banqueting Hall.

Since the honour was conferred upon them, Manchester has lost three of its Honorary Freemen—namely, Mr. Oliver Heywood, who died March, 1892; Mr. Alderman Abel Heywood, who died August, 1893; and Mr. James Jardine, who died September, 1893.





NOTE:

F e l l s

1



Thirlmere Waterworks.



THE water supply of Manchester would appear even in its early stages to have been, more or less, under the control of the public authorities. In the sixteenth century the "Conduit" was one of the ornaments of the town, and with a laudable desire to preserve it in good condition the Court Leet of the Manor made sundry regulations respecting it. Thus in 1572 the inhabitants in its vicinity were ordered to keep clean the streets in and about it under a fine of 6d. In 1579 there was evidently a scarcity of water, for it was then ordered that no vessel larger than a woman could carry when full should be brought to the conduit, and then only one from each house. The conduit was ruined by the destruction, in 1772, of the spring in Fountain Street, at the upper end of King Street, from which it had been supplied. The Lord of the Manor, Sir Oswald Mosley, afterwards erected waterworks at Holt Town and Beswick, from whence portions of the town were supplied by means of wooden pipes; these works were taken over by a private Company, called "The Manchester and Salford Waterworks Company," formed in 1808, who added to them additional reservoirs at Gorton, supplied partly from the streams in that locality, partly from a well sunk in the new red sandstone, and augmented by a supply from the Manchester and Stockport Canal; and as the wooden pipes had not been satisfactory, the water was conveyed in pipes made out of soft oolitic sandstone, but these were found to be porous, and were ultimately discarded in favour of cast-iron pipes.

The expansion of Manchester as a residential and industrial district made some further provision absolutely necessary. The

water supplied by the Company left much to be desired alike in quality and quantity, and it was felt that a provision so important for the health and convenience of the community should be in the hands of the authorities of the town. The Corporation, who purchased the old works in 1847, had at that time already begun to grapple with the difficult problem of obtaining an ample and excellent supply of water by gravitation for the domestic and industrial needs of Manchester. By the advice of Mr. Bateman, C.E., the valley of Longdendale was selected as a gathering ground, and the necessary Parliamentary powers were obtained. The construction of works began in August, 1848, and the Audenshaw reservoirs, the last of the series, were completed in 1884. The reservoirs at Longdendale are constructed on the bed of the River Etherow and tributary streams.

The cost of the Company's works has been £533,561, and the adaptation of Longdendale has involved a further capital expenditure of £2,614,332, making a total of £3,147,893.

The character of these works is so well known that it is unnecessary to further refer to them.

The area supplied with water by the Corporation of Manchester is about 85 square miles, and extends 11 miles westward and eight miles eastward from the Manchester Town Hall. In addition, water is furnished in bulk to several local authorities, including the Township of Salford, and public Companies, who make their own arrangements for its service and distribution. Thus it is estimated that a million persons are dependent upon the supply provided by the Manchester Waterworks.

This brief reference to the past history of our water supply will enable an estimate to be formed of the importance and difficulty of the problem which the Thirlmere Water Scheme is intended to solve. The old Water Company gave a supply of about $3\frac{1}{2}$ million gallons daily. In 1851 the water came from Longdendale, and the natural effect of an abundance of water of excellent quality was to stimulate the demand. Quantities that would once have been deemed a luxury came to be regarded as a necessity, and the requirements of the trade of the district continually augmented. The increase in population led to greater and greater demands, so that by the year 1864 the

consumption was about three times as much as in 1851. The responsibilities of the Waterworks Committee to the community were great, and they had to look far ahead of the passing day in their calculations. In 1868, Mr. Bateman reported that the then existing arrangements would only be adequate for eight or nine years longer; and in 1874, after dealing with the then projected reservoirs at Audenshaw, which were constructed to provide further storage for the Longdendale water, he reported that the supply was not more than about seven years in advance of the requirements.

No immediate action, however, was taken at this time in the matter, but in the spring of 1875 Mr. Bateman referred to the subject in an urgent and impressive manner, and pointed out the danger of Longdendale becoming insufficient for the increasing needs of the district, and assigned the year 1882 as the possible limit. Mr. Bateman in subsequent reports suggested that, either in conjunction with Liverpool or separately, water should be obtained from Ullswater and Haweswater; but this scheme did not meet with the approval of the representatives of either Manchester or Liverpool, and the project was therefore abandoned. The Royal Commission on the Water Supply of London had in 1869 referred not only to the capabilities of Ullswater, but also of Thirlmere, and it was therefore in this direction that the Manchester Waterworks Committee now turned their eyes.

After consideration, the Committee decided to purchase, by private contract, the lands and water rights necessary for the Thirlmere Scheme, "if practicable to do so upon reasonable terms," in order to place the Corporation in a favourable position when they applied to Parliament for the necessary powers. The carrying out of this resolution was entrusted to a Sub-Committee, consisting of Alderman Grave (Chairman), Alderman Patteson (Deputy-Chairman), Alderman Bennett, and Councillors Booth and Harwood. If the Thirlmere Scheme were to be adopted it was thought desirable, from the experience gained at Longdendale, that the whole of the watershed should be purchased so as to have absolute control.

Lake Thirlmere, which is situate at the foot of the "Mighty Helvellyn," in the county of Cumberland, about 96 miles from Manchester, is the only other lake in the Lake District besides Ullswater and Haweswater that is suitable for supplying water to Manchester by gravitation. It is about three miles long, and at its

widest part is somewhat more than a quarter of a mile across. Its elevation is 533 feet above sea level, and the natural depth of its waters is 112 feet. The ordinary area of the lake is 330 acres, and the watershed that can be appropriated is about 11,000 acres. Passing over Dunmail Raise, a descent is made into the valley. On the left is the traditionary Cairn of Dunmail, "Last King of Rocky Cumberland." As the vale of Thirlmere at this point lies before the spectator, he has Steel Fell on the left, and on the right is Seat Sandal and the brow of Helvellyn. Below Dunmail Raise is the famous Nag's Head Inn and "Wythburn's modest House of Prayer." Dale Head Park and Armboth and the well-wooded Great How are afterwards seen. On the opposite side of the lake is Fisher Crag and Wythburn and Armboth Fells, and northwards the Raven Crag. At the north-east corner of the lake is a narrow gorge, where St. John's Beck begins. "From the very appearance and character of its surroundings," says Alderman Sir John J. Harwood, in his "History and Description of the Thirlmere Water Scheme," "the valley might have been made for the purpose of a gathering ground for water. It is situate in the heart of about the heaviest rainfall in the country. The mountains surrounding it consist of Silurian rock, are exceedingly steep, and are covered with very little verdure, so that the rain which falls flows direct into the lake, and sometimes fifteen or sixteen cascades or watercourses can be seen at once running down the mountain slopes, quite pure, and as clear as crystal."

The Sub-Committee found it a somewhat difficult task to obtain the information needed for the purchase of land, as the scheme was not at all favourably received in the locality, and every possible obstacle was put in their way. They, however, in the end were successful in obtaining a full and accurate record of every farm in the district.

Various details connected with the purchase of the lake, and land necessary for the works, have been fully dealt with by Sir John J. Harwood in his "History."

The time now arrived when the City Council had to pronounce decisively on the Thirlmere Scheme. At the meeting of the Council held 4th July, 1877, the Committee submitted their report, which was accompanied by reports from Mr. Bateman and by analyses of Thirlmere water, which was declared to be superior to either the

Longdendale or Loch Katrine waters, and "therefore one of the very best waters known." After discussion, the recommendations of the Waterworks Committee were adopted by 43 votes to 1.

The scheme was afterwards submitted to a meeting of owners and ratepayers, held in the old Town Hall, 19th July, 1877, in compliance with the Borough Funds Act 1872. The meeting was presided over by Alderman Grundy, and the scheme was accepted by a resolution, which approved of an application to Parliament for the necessary powers. The Thirlmere Bill was duly deposited, and counsel engaged. The senior counsel, Sir Edmund Beckett, Q.C. (now Lord Grimthorpe), visited the locality, and made strenuous exertions in support of the project. The capital for the entire scheme was fixed at £3,425,000. The Bill was introduced into the House of Commons, and it came up for second reading 12th February, 1878. Mr. E. Stafford Howard moved its rejection, and was supported by the Hon. Wm. Lowther. Then Mr. Birley and Mr. Jacob Bright spoke in advocacy of the Bill, and ultimately it was referred to a Hybrid Committee, with full power to inquire into the whole subject. This was agreed to by the advocates for and against the Bill. The Committee met for the first time, 22nd February, 1878. There were thirty-three petitions lodged against the Bill from landowners, local authorities, and others. In some cases, of course, the opposition was not of a serious character, the aim being only to obtain clauses protective of their several interests.

The nineteenth and final meeting of the Committee was held 8th April, 1878. The report was a full vindication of the scheme. The necessity for the additional supply was acknowledged, and also the propriety of going to the Lake District for it. The Committee further saw that the projected roads would make Lake Thirlmere visible to a much larger number of persons than saw it under the old conditions, nor did they acknowledge that the artificial restoration of the lake to its former size would be a detriment to the picturesque beauty of the district. The engineering plans were held to be satisfactory. The practical decision may be given in the words of the resolution on which the report was based :—

That the Preamble is proved, subject to clauses being introduced to the satisfaction of the Committee, providing that water will be supplied in bulk to the towns and local authorities demanding the same, if they are situated in the neighbourhood of the aqueduct between Thirlmere and Manchester, and subject to the condition that

Manchester and the district which it has to supply by their present Acts have a prior right of supply, not exceeding, both from Thirlmere and Longdendale, 25 gallons per head of the population then existing.

Various towns and rural districts made application to be supplied with water if the Bill was successful. The Corporation, to meet these requirements, and in obedience to the order of the Parliamentary Committee, introduced the requisite clauses, and the Bill was read a third time in the House of Commons. When the Bill was sent up to the House of Lords it was urged that as the new powers were not included in the notices given in November, 1877, the Bill did not comply with the Standing Orders. The answer was that these powers had been added at the instance of the House of Commons, and were, in effect, a restriction on the Corporation of Manchester. The Examiner of Private Bills in the House of Lords decided that the Bill did not technically comply with the Standing Orders. This decision being afterwards confirmed by the Standing Orders Committee, the whole of the time and money expended in the promotion of the Bill in this session was practically rendered useless.

At a meeting of the City Council, 14th August, 1878, the Mayor (Alderman Grundy) moved a resolution, which was seconded by Alderman Grave, authorising the promotion of the Bill in the next session of Parliament. An amendment for referring the whole subject to another Committee for further enquiry as to the necessity of providing an additional immediate supply of water was supported only by two members, whilst the resolution secured 42 votes. The statutory meeting of owners and ratepayers was held in the Town Hall, 16th August, 1878, when, after considerable discussion, the resolution of approval was carried by a large majority, but a poll was demanded. Numerous meetings were held in the wards, and active discussion went on in the newspapers; but the views of the ratepayers were decisively shown by the result of the poll, when 43,362 votes were given for and 3,530 against the proposal.

Having at this time made considerable progress in the purchase of lands and properties, the Corporation were altogether in a more favourable position for the Parliamentary struggle. The Bill was introduced into the House of Commons, and having been read a second time was referred to a Select Committee. The counsel retained in support of the Bill were the same as in the previous session, but the opposition

was limited, and the Bill was duly passed. When it reached the House of Lords it was referred to a Select Committee of that House, which met on 6th May, 1879, and then adjourned to the 9th, when Sir Edmund Beckett observed that "though this was once a very interesting case, it had become very flat, there being no opposition to it except upon clauses." The Bill was reported to the House of Lords, read a third time, and received the Royal Assent 23rd May, 1879.

This narrative of the difficulties to be overcome by a Corporation projecting a great work for the public benefit, apart from its historic interest, furnishes some materials for thought in connection with the costly and cumbrous nature of the present machinery for the passing of measures connected with the health and prosperity of our great urban communities.

The natural watershed of Lake Thirlmere is 7,400 acres, but it will be increased by intercepting streams which flow into St. John's Beck at a lower level. In this way Shoulthwaite Gill will add 1,020 acres, and Mill Gill, Stanah Gill, Fisherplace Gill, and Helvellyn Gill 2,500 acres; the total watershed being thereby extended to about 11,000 acres. This is not much more than half the area draining into the Longdendale reservoirs, but, owing to the heavier rainfall in the Lake District, Thirlmere will give for "supply" 50,000,000 gallons and for "compensation" 5,500,000, instead of 24,500,000 gallons and 13,500,000 respectively from Longdendale. In Longdendale there are 19,000 acres, with a minimum average of 44 inches rainfall, minus 10 inches loss by evaporation and absorption. Thirlmere will have 11,000 acres, with a minimum average rainfall of 80 inches per annum, minus 8 inches loss. Another point in which Thirlmere has the advantage as a source of water supply is, that droughts are likely to be of much shorter duration than elsewhere.

By the erection of the embankment at the outlet of the lake the surface will eventually be raised fifty feet, and the margin formed by the hills will be just as "natural" as that of the lake when it had a lower level. The dam is, in fact, an artificial restoration of the former contour, for the gap through which St. John's Beck ran was undoubtedly an outlet caused by the slow abrading of the rock by the passage of the water. The aqueduct commences at the south-eastern corner of the lake, the water running in about 531 feet above Ordnance datum, and is delivered at Prestwich, 96 miles distant, at a height of

353 feet above datum, and will therefore have a fall of 178 feet in this distance. The gradient is not of course a straight line, the cut and cover portion of the aqueduct following a contour line, and the piping being arranged for the easiest and most economical track from one point to another. Notwithstanding this, the works executed are necessarily of a heavy and sometimes elaborate character. In twenty-two miles, between Thirlmere and Kendal, there are 17 tunnels having altogether a length of 14,000 yards, 7 syphons with an aggregate length of 9,000 yards, and 15,700 yards of cut and cover. The aqueduct begins in tunnel at the lake under the slope of Helvellyn, and does not come to light until it is a mile to the south of the summit of Dunmail Raise, a distance of three miles. It then skirts the hillside in a trench which has again been covered by the earth. This is the "cut and cover." Where necessary, instead of following the natural contour, a valley is crossed by means of pipes. The piping is cast iron, 48, 40, and 36 inches in diameter, sufficient to convey 10 million gallons per day. As the demand increases, additional pipes will be laid, and the scheme, comprising five lines of pipes, completed. The greatest pressure is at the crossing of the River Lune near Lancaster, where it is equal to about 416 feet, or 200lbs. on the square inch. These pipes are underground, except at the crossing of the rivers Lune, Ribble, &c., where they are placed on bridges.

The actual beginning of the work was delayed practically until the way-leaves had been obtained and other necessary arrangements with regard to land had been completed, and, further, from the fact that after the obtaining of the Thirlmere Act in 1879 a series of wet years and a depression in trade followed, which led the Corporation to postpone further expense on works until a more convenient opportunity.

Alderman Grave was succeeded in the Chairmanship of the Waterworks Committee by Alderman Patteson. In 1886, on the retirement of Alderman Patteson, the present Chairman (Sir John James Harwood) was appointed, and on him has devolved much of the responsibility in the execution of these great works. The Engineer (Mr. G. H. Hill, C.E.) was appointed to carry out the works in January, 1885.

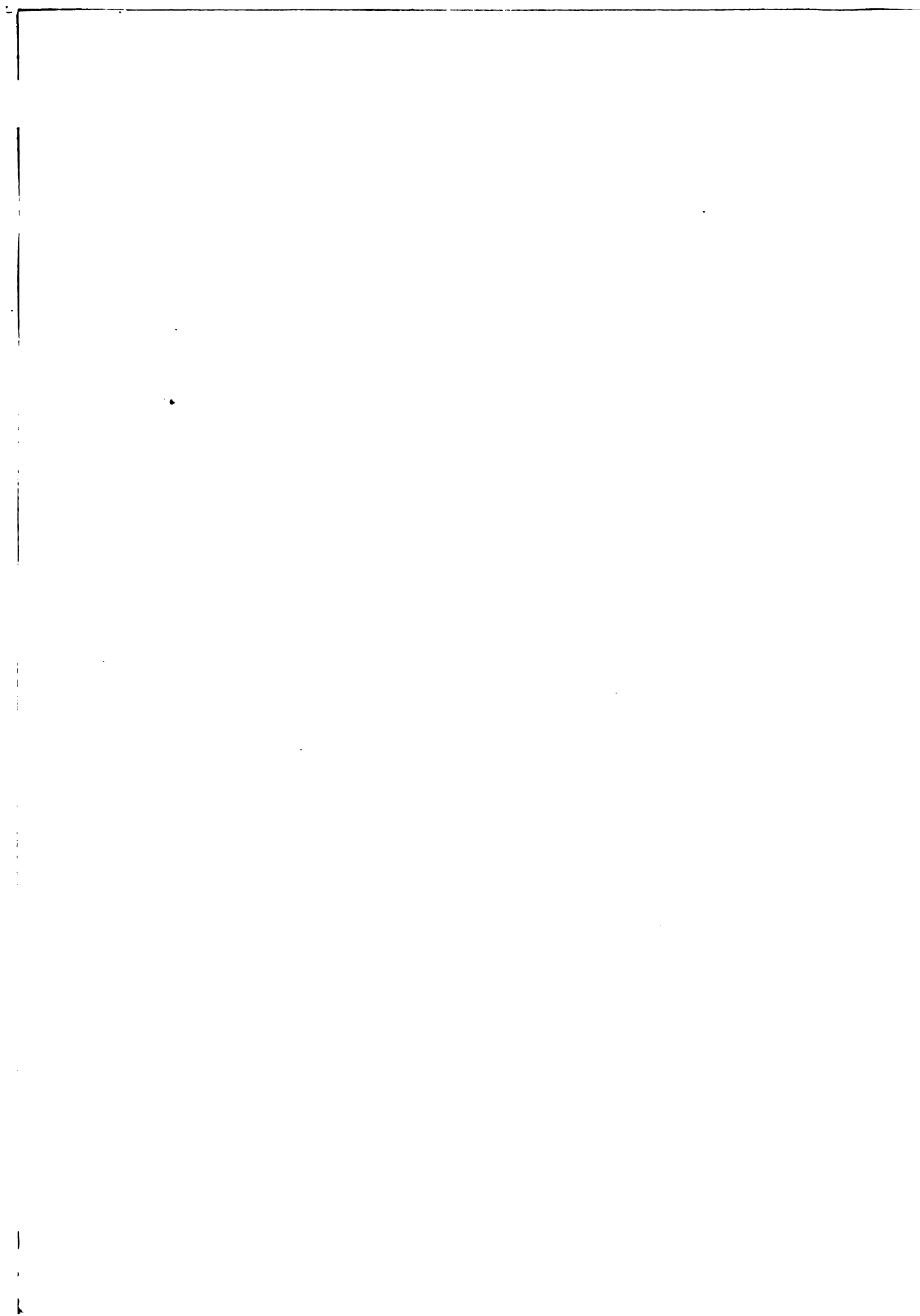
The cost of the first ten million gallons per day may be taken at £2,500,000, and for each subsequent ten million gallons per day may

be added, say, £500,000. The simplicity of the works by which Thirlmere is connected with Manchester does not detract either from their magnitude, or from the skill necessary in their design and execution, but, on the contrary, is a characteristic of engineering ability. To follow the line of least resistance, and to make as little alteration as possible in what nature has done, is always the wise and safe course, dictated by science. In the new Manchester Waterworks, Nature has been supplemented by Art, so that the "Waters of Thirlmere and the Clouds of Helvellyn" are made to contribute to the health, industry, and wealth of the immense population having Manchester for its capital and centre.





ENTRANCE TO ELECTRIC LIGHT WORKS.





The Electric Light Installation.



ALTHOUGH somewhat late in the day as compared with some other cities, Manchester, benefiting by the experience gained during ten years, at length obtained an Electric Light Installation in full working order which, for completeness and efficiency, is not excelled in the United Kingdom. It was well for the City that the electric lighting enterprise was not entered upon rashly. More than ten years ago the attention of the City Council was drawn to the subject, and immediately after the passing of the first Act of Parliament it was decided to apply for a Provisional Order, the Council having previously determined (20th May, 1881) that steps should be taken with a view to enabling the Gas Committee "to exercise, in regard to the electric light, all powers now possessed by them in relation to gas." The Act, which received the Royal Assent on the 18th August, 1882, contained various provisions—adopted at the suggestion of the Conference of Municipal and Local Authorities, held in Manchester in the month of April preceding—for safeguarding the interests of such authorities. These provisions were embodied in the rules of the Board of Trade subsequently issued. The Act left it open, in case of the failure of local authorities, for private companies to apply for and obtain Orders, under the sanction of the Board of Trade, for supplying the electric light ; but the Corporation of Manchester early determined that, so far as the City was concerned, the introduction of any private enterprise, in a sphere which was peculiarly that of the municipality, was undesirable. The Town Clerk was instructed to

inform all companies making application, of the Corporation's intention, and to state that, in the meantime, no application on the part of any Electric Company for an installation could be entertained. At the same time it was determined not to include in the intended Provisional Order any of the districts outside the municipal area.

The matter had hardly got beyond this stage when difficulties were interposed by the action of the Board of Trade. The Electric Lighting Sub-Committee wished, after consultation with the representatives of other Corporations, and also with the Board of Trade, to obtain an Order without compulsory obligation of supply. "But," said the Sub-Committee, in a report which they presented to the Gas Committee, "the Board of Trade have determined to impose upon all Corporations the principle of an Order which the Corporation of Bradford are willing to accept, or, in other words, they have adopted the Bradford Order as their model. That Order contains a limited area of electrical supply, and also contains power for the Board of Trade to revoke the Order upon default of the local authority. This Corporation, and others associated with them, have been perfectly willing that the Board of Trade should have and exercise the power of revoking the Order in case of inaction, so that the main feature upon which the Board of Trade are at issue with the Corporation is an immediate area of compulsory supply. The Sub-Committee learn that companies obtaining Orders in any district are bound to give the local authority the option of doing work in the streets. It would thus appear that even if a company were to obtain a Provisional Order next session that restriction would be imposed. If the Corporation were to take the Bradford Order, they must at once arrange with a company to undertake the work, and therefore under disadvantageous terms. Your Sub-Committee therefore consider it better to abandon the application. As authorised by resolution, 15th December, 1882—"at their discretion at any time to abandon the proceedings for the Provisional Order"—they recommend the adoption of the following resolutions:—

That an intimation be respectfully conveyed to the Board of Trade that this Corporation regret that they cannot accept the form of Order proposed by the Board of Trade in the Bradford case, and they submit that, as the local circumstances differ, that precedent ought not to be made applicable to Manchester.

That, as the communications from the Board indicate a final determination, the Corporation of Manchester feel that they have no alternative but to withdraw from the further prosecution of their Order."

This report received the approval of the City Council, and the proposed Order was dropped.

The Corporation, nevertheless, maintained a watchful attitude, and in April, 1886, the Gas Committee (to whom all matters relating to electric lighting were entrusted) appointed a Special Sub-Committee, with authority to attend proceedings in Parliament in relation to the then pending Government Bill, "to give evidence, and to take such measures, either alone or in conjunction with other Corporations, as they may deem necessary for preserving the benefits secured to local authorities by the Electric Lighting Act, 1882."

Nothing was done until after the passing of the Electric Lighting Act of 1888. In that and the following year, six notices of applications for Provisional Orders were lodged with the Corporation by private companies, and at the instance of Alderman Sir John J. Harwood (Deputy-Chairman of the Gas Committee), who had been energetic in pressing the matter upon the attention of the Municipal Corporations Association, it was resolved to refuse consent to any of such applications. The companies who lodged notices were, the Anglo-American Brush Electric Light Corporation Limited; the Manchester Edison-Swan Company Limited; the Laing, Wharton, and Down Construction-Syndicate Limited; the Manchester House to House Electric Company Limited; the Electric Construction and Maintenance Company Limited; and Crompton and Company Limited. A report of the Gas Committee, dated July 30th, 1889, recommended that application should be made to Parliament for a Provisional Order to authorise the supply of electricity by the Corporation of Manchester for public and private purposes within the City. This report was adopted, and in the month of August the Committee directed an application to be made to the Board of Trade in due form, all necessary steps in relation thereto being left in the hands of the Town Clerk and the Deputy-Chairman of the Gas Committee (Sir John J. Harwood). A suitable area of supply, with site of generating station, and a compulsory area were mapped out, and approved, and the Town Clerk was instructed to issue all necessary advertisements, and deposit plans in connection with the Provisional Order. The area so mapped out was bounded by the following streets:—Commencing at Deansgate at the southerly side of the Manchester South Junction and

Altrincham Railway at Hewitt Street, passing along Deansgate in a northerly direction to Victoria Street, thence along Victoria Street to Hunt's Bank and Great Ducie Street to New Bridge Street, thence along New Bridge Street in a north-easterly direction to York Street, thence in a south-easterly direction along Corporation Street, Ducie Bridge, Miller Street, Swan Street, and Great Ancoats Street to Newton Street, thence along Newton Street to Dale Street, thence along Dale Street to Ducie Street, London Road, thence along Ducie Street aforesaid in a north-easterly direction to Junction Street, thence along Junction Street in a south-easterly direction to Store Street, thence along Store Street to Boad Street, along Boad Street and Sheffield Street to Travis Street, thence in a south-westerly direction along Travis Street to Fairfield Street, thence along Fairfield Street in a westerly direction to the southerly side of the Manchester South Junction and Altrincham Railway, and thence along the southerly side of that railway to Deansgate, the houses and buildings on both sides of all the aforesaid streets being included in the area of supply. The streets along which the Corporation bound themselves to lay distributing mains within two years from the date of the Order were Deansgate (from King Street to St. Mary's Gate), St. Mary's Gate, Market Street, Piccadilly (from Market Street to Mosley Street), Mosley Street (from Piccadilly to York Street), York Street, Spring Gardens (from Market Street to King Street), King Street (from Spring Gardens to Deansgate), and Cross Street (from King Street to Market Street).

The Provisional Order confirmed by Parliament was received on the 26th September, 1890, and a Special Electric Lighting Sub-Committee, consisting of Aldermen Lamb, Sir John J. Harwood, Higginbottom, King, and Milling, Councillors Jos. Brooks, Butterworth, Clay, Gibson, and S. C. Thompson, was appointed by the Gas Committee to carry out its provisions, and to deal with all matters arising under the Electric Lighting Acts 1882 and 1888. This Sub-Committee was authorised (with a view to facilitate the introduction of electric lighting at the earliest practicable period) to obtain proposals from Electric Lighting Companies for supplying electricity within the area of supply, and also, subject to the approval of the Gas Committee and the City Council, to enter into such arrangements as might be found desirable for the purpose of giving effect to the

Order obtained by the Corporation, themselves undertaking the work, or by making suitable arrangements with companies for that purpose. Early in April the Sub-Committee presented a report of visits they had paid to various electric lighting works, including the one at Bradford, and seven in different parts of London. They were then authorised by the Council to obtain reports from four consulting electrical engineers as to the best method of carrying out the Order, and the most suitable system and plant. Reports were invited and received from Dr. John Hopkinson, F.R.S., Mr. Preece, F.R.S., Prof. Kennedy, F.R.S., and Mr. Shoolbred. Dr. Hopkinson's report, which was adopted by the Committee, August 28th, 1891, contained a general discussion of the relative advantages of high and low tension systems, and concluded with the following words:—

Giving, as I do, much weight to the use of electricity for the purpose of power, and also to the possible future use of accumulators, I recommend the direct current system at as high tension as the regulations of the Board of Trade permit—that is, at a tension of 400 volts, divided amongst consumers at a tension of 100 volts.

Upon this recommendation was based the specification which followed. A plant capable of delivering 5,000,000 watts was recommended for supplying the whole district, or 900,000 watts for the compulsory area only, taking the gas consumption of the City as a standard. Burnt in ordinary burners, Manchester gas, it was found, would give about $2\frac{1}{2}$ candles per cubic foot per hour, whereas electricity took about 4 watts to produce one candle. Hence one cubic foot of gas per hour was equivalent to about 10 watts. Electricity charged at 3d. per unit, Dr. Hopkinson said, would be equivalent to the cost of gas, if the demand were continuous and steady; but as the demand was very much the reverse, a higher charge was advised.

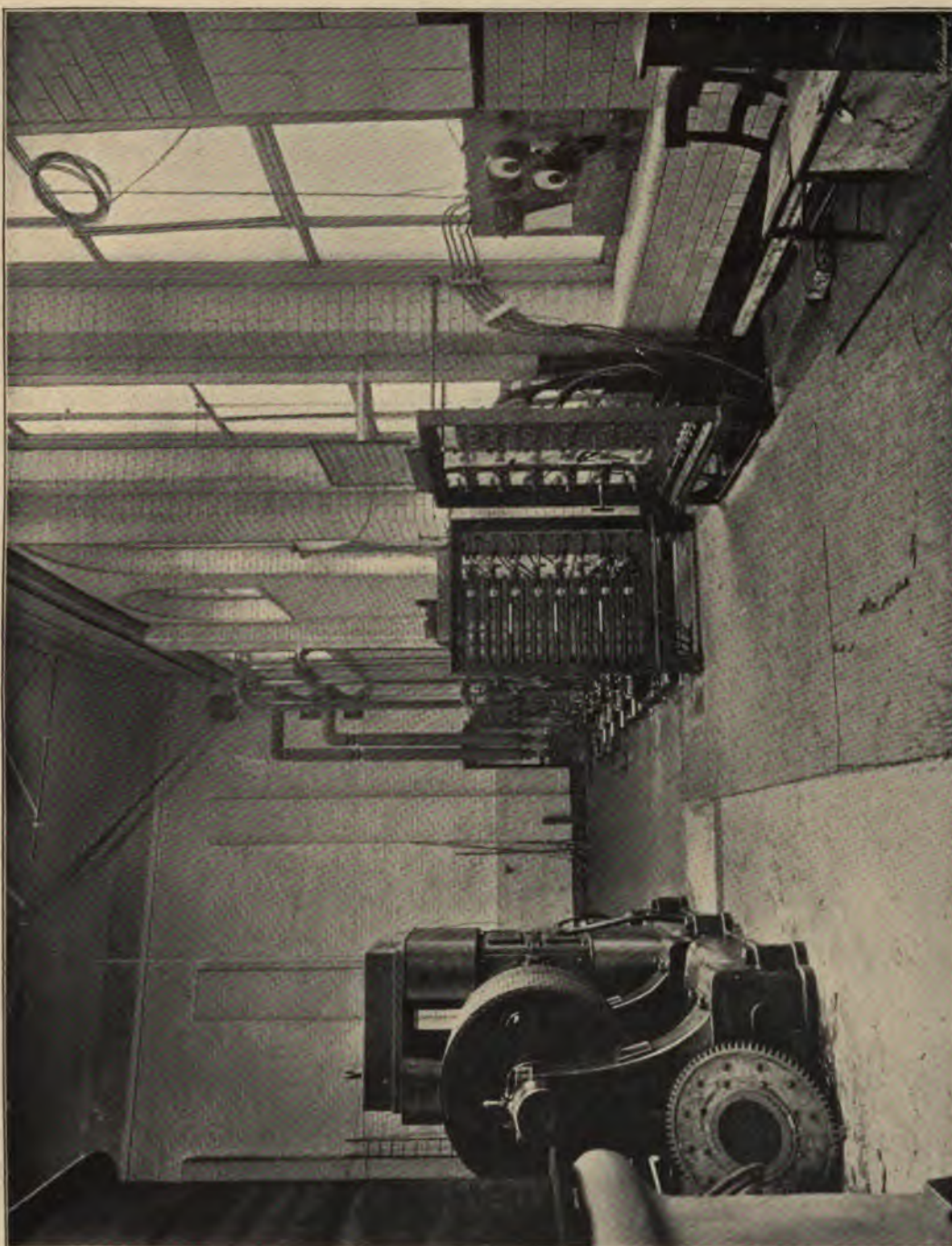
The Board of Trade's approval of the system, adopted on the advice of Dr. Hopkinson, was in the following terms:—

The system is a low pressure, direct supply, continuous current system at constant pressure, each main consisting of five separate conductors differing from each other in electrical potential, one of these conductors being maintained by suitable means at or near the potential of the earth, two being positive to the earth, and two negative, the steps of potential being slightly above 100 volts each. The mains will be laid throughout in iron or concrete conduits or pipes, and will be in part continuously insulated, and in part formed of bare stretched conductors supported and insulated at intervals in the conduit. The conduits will contain no material of a conducting nature other than the mains.

The Council, in pursuance of a recommendation of the Committee, appointed Dr. John Hopkinson to act as Electrical Engineer for the carrying out of the Provisional Order. Borrowing powers were sought from the Local Government Board to the extent of £150,000, but of this sum only £80,000 was borrowed at first, a later resolution (May 19th, 1893) empowering the Town Clerk to make arrangements with the Local Government Board for authority to borrow the balance of £70,000. The idea at first entertained of placing the electric light and the hydraulic power stations on the same site was abandoned by the Committee, and the City Council, on their recommendation, resolved (6th January, 1892) that, having regard to the future developments and the probabilities of extensions of both electric lighting and hydraulic power, the site in Dickinson Street (formerly used as a town's yard in connection with the Highways Department) should be allotted entirely to electric lighting. The site offered special advantages as being central with regard to the supply, and also handy for the unloading of coal and machinery, the Manchester and Rochdale Canal running on three sides of it. It was arranged that the Electric Light Department should bear the cost of the transfer of the Highways Department to suitable premises in Great Bridgewater Street. Such cost, including land and buildings, amounted to about £47,103.

Contracts for the various parts of the work, in accordance with Dr. Hopkinson's specifications, were given out in 1892, the successful tenderers being as follow:—

Large Engines (fitted with Körting's condensers): Galloways Limited.
 Small Engines (fitted with Ledward's condensers): Hornsby and Sons Limited.
 Boilers (fitted with Vicars' mechanical stokers, and inclusive of Green's economisers): Galloways Limited.
 Conductors, Mains, &c.: The International Okonite Company Limited.
 Dynamos: The Electric Construction Corporation Limited, and Mather and Platt Limited.
 Iron Roof: Edward Wood.
 Machinery House, &c.: C. H. Normanton.
 Chimney: C. H. Normanton.
 Steel Tank: John Lysaght Limited.
 Hand Power Cranes: H. and J. Ellis.
 Electrical Crane: Mather and Platt Limited
 Economiser Tank, &c.: Edward Wood.
 Switch-boards: Mather and Platt Limited.
 Cables (Supplementary Contract): The India Rubber, Gutta Percha, &c., Company.
 Wiring Town Hall: Fowler, Lancaster, & Co.



ELECTRIC LIGHT-SWITCH BOARD.

The contract with the Okonite Company was determined before the work was completed, and the Corporation themselves undertook and completed the operation of laying the mains throughout the compulsory area with cables purchased from the Sivertown Company.

The Electric Lighting Sub-Committee appointed for 1892-3 consisted of the following members of the Council:—Alderman Sir John J. Harwood (Chairman), Alderman Higginbottom (Deputy-Chairman), Aldermen Clay, Gibson, Griffin, King, Milling, and S. C. Thompson, Councillors Bowes, Jos. Brooks, S. H. Brooks, Butterworth, Jennison, Uttley, and Williams.

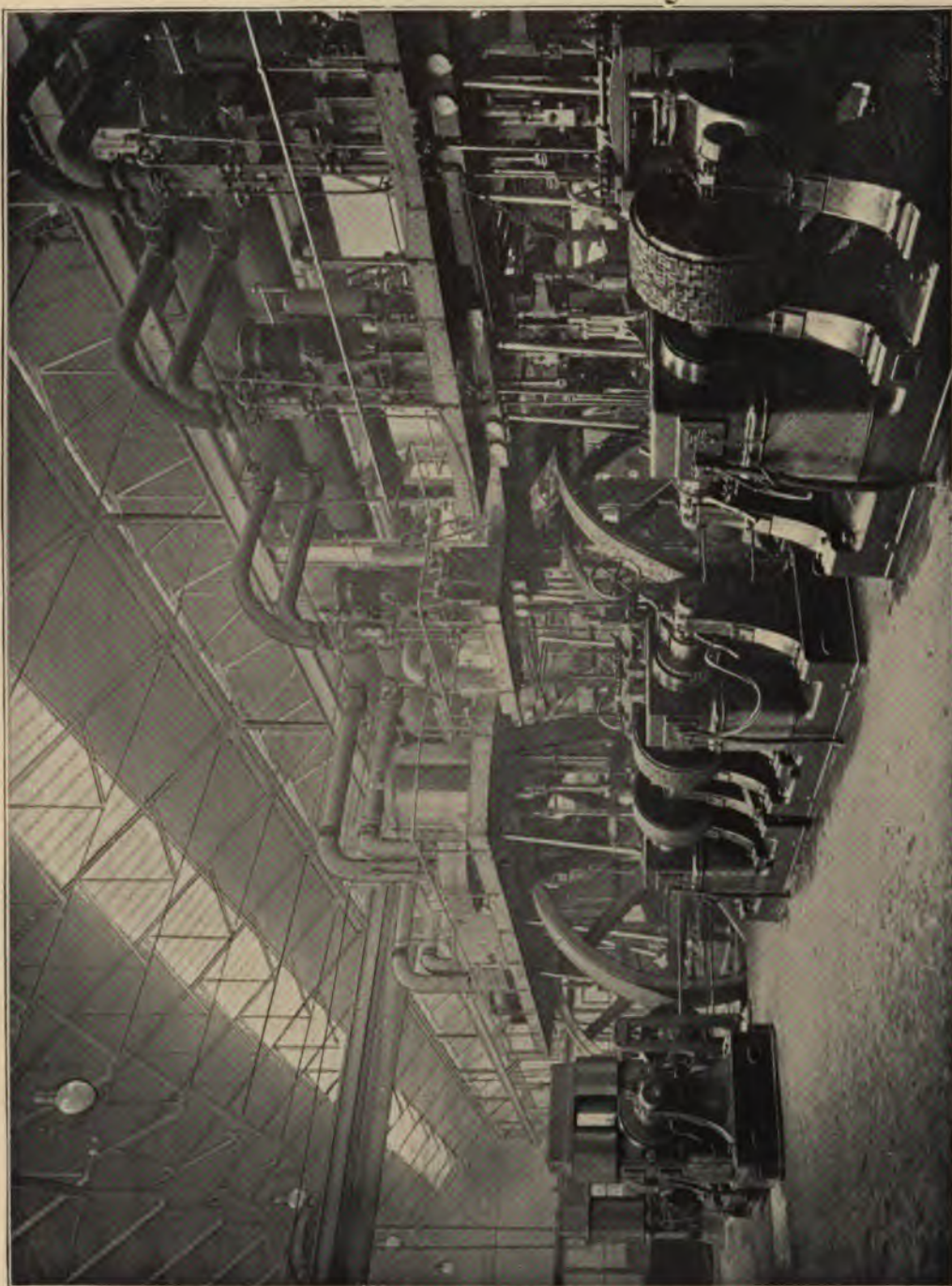
DESCRIPTION OF THE PLANT.

Six boilers were supplied by Galloways Limited, made of steel, (each 30 feet long by 8 feet), to work at 125lbs. pressure. They are fitted with Vicars' mechanical stokers. An unusual feature in the arrangement is the duplication of the entire range of steam and feed pipes: so complete is it that under no possible combination of circumstances can the whole of the boilers or engines be rendered inoperative. The steam pipes are 18in. diameter, of wrought steel. All the flues are discharged into a large main flue in rear of the boilers, and this main flue is connected with an economiser house (fitted with Green's economisers) built between the boiler house and the high chimney. Before the exhaust heat finally escapes it is in this manner utilised to aid in the heating of a two-fold range of 280 pipes used to feed the boilers with warm water. The boiler house is 77 feet long by 70 feet wide, and can be extended if necessary to double these dimensions. From end to end it is covered by an enormous tank, constructed of wrought steel, and weighing 160 tons. It is built in seven compartments, and will hold no less than 205,000 gallons of water, weighing 915 tons. This tank was manufactured and built by the well-known Bristol firm of John Lysaght Limited. An electric crane, by Mather and Platt, runs along the entire length of the boiler house, by which canal boats will be rapidly unloaded. Between the water tank and the floor of the engine house adjoining there is an intermediate coal stage, with bunkers attached, for mechanical stoking.

The chimney, which adjoins the boiler house, is 212 feet high, and 34 feet square at the base. The engine house is 200 feet by 80 feet, and 43 feet in height. It is lined with glazed bricks. The building

is divided into two bays, and has a double row of columns through which the steam pipes run at one elevation. At another elevation there is an iron gangway or platform, and there are above that longitudinal girders on which a 10-ton crane travels the whole length of each bay for facilitating the setting and hauling of the machinery. The foundations and beds for the engines and dynamos are of solid concrete, and have been made 12 feet thick, in order to prevent the possibility of vibration. The Galloway engines consist of four distinct compound vertical engines, each having high pressure cylinder 17 inches diameter, low pressure 34 inches diameter, with a stroke of 3 feet. They are intended to work at a pressure of 120lbs., and to develop 400 horse power each when running at a piston speed of 300 feet per minute. The engines supplied by Messrs. Hornsby consist of six vertical tandem compound condensing engines, which also work at 120lbs. steam pressure, and are constructed to run at from 120 to 135 revolutions per minute.

Messrs. Mather and Platt have supplied most of the electrical equipment of the station, including two large dynamos, four motor-generators or transformers (for transforming from any one of the sections of the five-wire system to any other), motors of the "Manchester" type for working the coal crane, and also for driving the ventilating fans placed in the engine house and in the culverts. They have also manufactured the switch-boards, which are of special design, constructed to Dr. Hopkinson's drawings. The two dynamos are of the larger size used. They are "Edison-Hopkinson" machines, capable of giving an output of 410 volts, 590 amperes, at a speed of 400 revolutions per minute. They are intended to work on the feeders of the five-wire system, and are driven by the Galloway engines. The machines, when tested to determine their commercial efficiency, gave the most satisfactory results. The two machines combined, the one acting as motor and the other as generator, gave an efficiency for the double conversion from electrical power into mechanical and back again into electrical of 90.5 per cent. Hence the commercial efficiency of each machine, *i.e.*, the efficiency as between electrical power available in the external circuits and mechanical power required to drive the machine, is 95 per cent. Combining this with the electrical efficiency, the efficiency of conversion is seen to be 97.7 per cent. In these results the friction of the bearings is included. In order to



ELECTRIC LIGHT.—DYNAMOS.

ensure the supply of dynamos of the highest possible efficiency, the Corporation offered the contractors a bonus on the efficiency attained above a certain limit. Under this clause Messrs. Mather and Platt received a bonus of £450—an amount which, it is calculated, will be liquidated in the saving of coal in less than two years. The armatures of these dynamos weigh 2 tons 19 cwt. each, and the weight of each entire machine is 24 tons 8 cwt. In addition there were various dynamos supplied by the Electric Construction Company, including two shunt-wound machines of the same size as the preceding, each giving a normal output of 410 volts, 590 amperes, at 400 revolutions per minute, the magnets being the double horse-shoe type, fixed vertically, and cut through the centre of the poles, so that the top horse-shoe can be removed for access to or removal of the armature. These machines are for supplying on to the two outside wires of the five-wire network. There are also six shunt machines of a smaller size, each fixing a normal output of 102 volts, 590 amperes, at 540 revolutions per minute. The magnets are of the single horse-shoe type, but specially arranged so that the armatures can be taken out by a direct lift.

The distinctive feature of the system is the five-wire distribution, this being the first example of the kind in England, though similar installations are in existence in Vienna, Paris, Trieste, and elsewhere on the Continent. The conductors consist for the most part of bare copper strips, clamped together into a square section, and laid side by side in one culvert on plain porcelain insulators. The culverts are chiefly of concrete, and where there is not room for these around the network of underground pipes and wires, the conductors have been insulated with a sheathing of india rubber, and laid in iron pipes at a depth of 18 inches below the footway. The conductors will carry current far in excess of the 40,000 or so eight candle power lamps, which represent the capacity of the plant now installed.

In June last the Committee announced the proposed charges, namely, a fixed sum of 2s. per quarter per lamp of eight candle power, and, in addition, 2d. per unit for every unit consumed. Where, however, this method of charging was objected to by intending consumers, an alternative charge of 8d. per unit was to be made, as provided for by the Board of Trade regulations, the minimum charge being 13s. 4d. per quarter.

A temporary supply was undertaken with two wires only in July, 1893, when the Free Trade Hall and other buildings were switched on; but the number of applications for the light grew so rapidly that it was determined to change over on the five wires. In the third week of September the number of consumers had reached 100, with a maximum of 10,000 eight candle power lamps in use. Hitherto they had been supplied on the simple parallel arrangement at 100 volts pressure. The transformation from two to five wires was completely effected on the evening of September 23rd.

A number of the large hotels and public buildings which are supplied with the light were immediately switched on, with the most satisfactory results. Up to the date in question, the Committee had in hand applications for over 30,000 eight candle power lamps—a demand representing about 75 per cent. of the productive power of the engines and plant. The conductors laid down in the streets were equal to the supply of 36,000 sixteen candle power lamps at one time. When the plant was ordered, the Committee were under the impression that they had anticipated the demand for, at any rate, the next three years; but so great was the popularity of the new light, immediately it was brought into use, that the question of a further extension, it was felt, would soon have to be considered. The station in Dickinson Street has room, at present unoccupied, for ten more of the larger sized engines.

It was not a part of the Committee's scheme, to begin with, to light any of the streets with the electric light. The chief demand was expected to come from the public buildings, and from the shops, offices, warehouses, and other places of business within the area of supply. One of the largest consumers will be the Town Hall, which has been wired for 2,500 lamps.





HYDRAULIC POWER.—PUMPING STATION.



Hydraulic Power Supply.



WATER as a motor has attracted the attention of both scientific and practical men for ages past. How far our ancestors used it is a matter of conjecture, but there are those who urge that some of the colossal works of past ages were wrought or assisted by water scientifically used.

Dismissing minor motors, such as compressed air and oil, there are three which seem to take a decided lead, viz.: steam, gas, and water. The first is universal in its application. Under ordinary circumstances, it is most powerful and regular, and can hardly be surpassed where coal is plentiful. The drawbacks are the labour and space required, the smoke and dirt, and the fact that to be economical the use must be constant.

The supply of power by means of gas engines has lately made rapid strides, and it is both reasonable in price and very convenient when the power required is somewhat limited.

Water under pressure is most valuable, because it can be equally well used to give the necessary power to the grocer grinding his coffee, or to the merchant packing his bales. It is, however, best adapted when the power required is intermittent. Its advantages are that it can be readily turned on or off, that there is no cost when not in use, that engines, boilers, or skilled labour are not required, and that neither smoke nor dirt follow its application on the premises of the consumer.

The hydraulic press was invented by Bramah nearly a century ago, and he applied it not only to the pressing, but to the lifting and lowering of goods, and within the last fifty years this system of power has been largely developed by the introduction of Lord Armstrong's system for docks and railways. In modern times we see a few gallons of water, placed under pressure, lift large boilers that hundreds of men could scarcely move. Many engineering firms have made a speciality of hydraulic machinery for various businesses, and it has frequently happened that neighbours have joined in putting down the necessary machinery and shared the supply.

Hydraulic power is perhaps used in Manchester to a greater extent than in any other city, almost every warehouse requiring to do packing of some kind or other, and the business generally is largely concentrated in one centre. The City is therefore pre-eminently adapted for a public distribution of the power on a large scale, as the greater the concentration the more advantageously can the power be supplied. A carefully considered scheme for such a distribution was therefore capable of rendering valuable service to trade and property by affording a ready method of working presses, hoists, and lifts, in hotels, warehouses, and other premises. The hydraulic engine has also the advantage of occupying a very small space as compared with other machinery. Further, great advantage is gained to the City by reducing the risk of fire through rendering unnecessary the large number of boilers and engines in use on private premises.

It is only, however, within recent years that companies have been formed with a view of placing creative power in the centre of a town, and then retailing it by means of mains laid to the various business premises that may desire it.

In 1860 an Act of Parliament was obtained enabling a company to supply hydraulic power in London, and works have also been established by the same promoters in Liverpool and Hull.

Finding that their efforts were successful in these places, they naturally sought from time to time to extend their operations to Manchester, and with that object introduced Bills in the Parliamentary Sessions of 1867, 1872, 1887, and 1890, applying for powers to form a company to supply hydraulic power in the City on lines similar to those adopted in the places already supplied.

The Bills of 1867 and 1872 were withdrawn when it was found that they would be opposed by the Corporation, and although the Bills of 1887 and 1890 ultimately shared the same fate, it was only after a more formidable appearance had been put in against them.

These repeated attempts at legislation on the part of the promoters of the hydraulic companies were evidence, at any rate, that they were of opinion that a supply of power of this character in the City was desirable, and would meet with, at least, a fair share of success. The Corporation, however, who had already incurred and were still further committed to a very large expenditure of public money in connection with the supply of water, objected to surrender any of their rights and privileges as the distributors of water in any form into the hands of a private company, whose principal object would be to derive profit from the undertaking. Again, the introduction into the City of a supply of hydraulic power would, no doubt, to a large extent, supplant existing arrangements in connection with the supply of water for generating steam and for working hoists and lifts, and the Corporation were unwilling to suffer any loss of revenue from these sources in the interests of a private company. Further, it was extremely undesirable that any body other than the Corporation should have the right to break open, or in any way interfere with, the roads and streets in the City in which there is so much traffic.

The Waterworks Committee, therefore, in 1887, turned their serious attention to the matter, and came to the conclusion that, if power of this character was required, it was the duty of the Corporation to provide it. Enquiries were made as to the extent hydraulic power was used or likely to be useful in the City, and investigations of an important character bearing on the question were made.

The Company's Bill of 1890 sought powers to supply hydraulic power both in Manchester and Salford, and contained provisions to enable the company to obtain water for their undertaking not only from the Corporation, but from other sources; also the necessary powers to break open the public roads and streets for the laying and repairing of mains.

The subject of the Bill was brought before a meeting of the Waterworks Committee on the 21st November, 1889, and although they

were not unanimous as to the desirability of opposing the introduction of hydraulic power into the City, they felt that under no circumstances should a private company be allowed to acquire a right to interfere with the roads and streets in the manner proposed. They thereupon adopted the following resolution, viz. :—

That this Committee, believing that the operations of this Bill will injuriously affect the interests of the Waterworks Department, the Parliamentary Sub-Committee be respectfully requested to instruct the Town Clerk to take the necessary steps to oppose the same on behalf of the Corporation.

Finding that every effort possible was being made to pass the Bill, the Corporation at once took strenuous action as its opponents. They forwarded a petition to Parliament against it, and sent a deputation to London, and, with the assistance chiefly of the various Lancashire members of Parliament, presented such a strong opposition that they secured the object they had in view.

In the meantime public feeling had been aroused, and it became evident that if hydraulic power was such a valuable factor as represented Manchester could not long delay its adoption, and the Corporation must either supply it or let others do so.

These circumstances induced the Corporation to again consider their position, and at a meeting of the Waterworks Committee held on the 27th February, 1890, the following resolution was adopted :—

That in the opinion of this Committee it is desirable that arrangements be made for the Corporation to supply water under pressure for the purposes of hydraulic power within the City and district, and that, provided it be found necessary to obtain further statutory powers for this purpose, application be made by Bill in the next session of Parliament.

This resolution was referred to a Special Sub-Committee consisting of the Chairman (Alderman Sir John J. Harwood), Deputy-Chairman (Alderman Leech), and Councillors Andrews, Hinchliffe, and Worthington, who had previously been appointed to make some preliminary investigation on the subject.

The Sub-Committee made further enquiries, and visited some of the towns already supplied with hydraulic power. They also had interviews with hydraulic engineers and users of power in Manchester and were specially pleased to find how water under great pressure could, by means of injector hydrants, be made to aid the supply from the ordinary water mains in extinguishing fires, thus adding materially to the protection of property. After very careful consideration,

they reported that, from the views they had been able to gather, they were of opinion that a system of hydraulic pressure distributed in mains within the City at about 700 or 800lbs. to the square inch, and made available for consumers for an annual rental, would be highly appreciated, and would be likely to be largely used for working hoists, lifts, cranes, and other machinery to which it is applicable, and also for the purpose of being used through "Intensifiers" on private premises for working hydraulic packing presses.

The report of the Sub-Committee was approved, and the Town Clerk was instructed to arrange for the introduction of a Bill in the following session of Parliament, and also to take such other steps as might be necessary for enabling the Corporation to supply motive power by hydraulic pressure for any purposes to which such motive power is applicable.

The Chairman and Deputy-Chairman of the Waterworks Committee were authorised to retain the services of such Engineer as in their judgment might be advisable in connection with the promotion of the Bill; and feeling satisfied with the character of the supply as developed in other places by Messrs. Ellington and Woodall, civil engineers, Westminster, the services of Mr. Woodall, C.E., were at once retained as adviser to the Corporation, and he was further instructed to lay out a scheme of hydraulic power for the City, a provision to enable this to be done being inserted in a Bill promoted by the Corporation in the Parliamentary Session of 1891, the capital expenditure for the scheme being estimated and fixed at £100,000. The clause having reference to hydraulic power was as follows:—

MANCHESTER CORPORATION BILL 1891.

Power to Supply Water for Hydraulic Pressure.

SECTION 13.—The power conferred upon the Corporation by section 96 of the Manchester Corporation Waterworks Act, 1847, to supply any person with water for other than domestic purposes at such rent and upon such terms and conditions as shall be agreed upon between the Corporation and the person desirous of having such supply of water, shall extend to the supply by the Corporation within the City by agreement of water under pressure for the purpose of supplying motive power by hydraulic pressure for any purposes to which such power is applicable, and such supply shall be deemed a purpose of the Waterworks Acts and a part of the Waterworks undertaking of the Corporation.

The Bill subsequently passed into law, and steps were forthwith taken by the Corporation to give effect thereto.

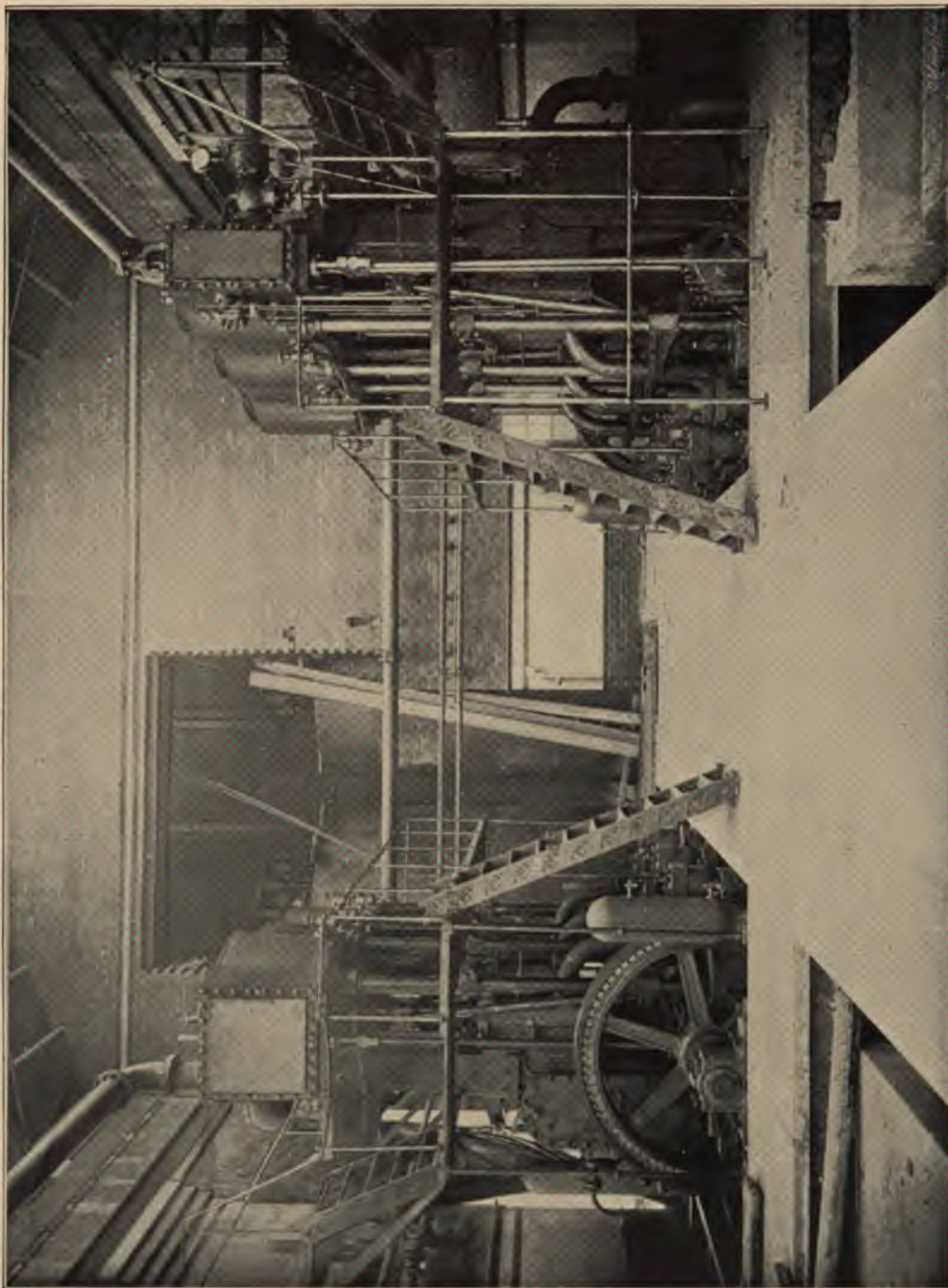
A suitable site for the erection of the pumping station and works was acquired on a plot of land in Gloucester Street, Oxford Street, formerly occupied by Messrs. Sharp, Stewart, and Company Limited. The plot measured $4,961\frac{1}{2}$ square yards. Two portions of it, containing 2,609 square yards and 1,369 square yards, are subject to chief rents amounting to £160. 16s. and £38. 11s. 10d. respectively.

The land cost £15,900 in addition to the chief rents, which are continued payable by the Corporation.

It may be incidentally mentioned that originally it was contemplated to also erect the Electric Lighting Station on this plot, but it was afterwards found not to be so suitable for the latter as the Dickinson Street site.

The land is bounded on one side by the Rochdale Canal, which is most useful for the conveyance of coals and stores to the works. Of the plot, 134 square yards at the front of the hydraulic buildings have been dedicated to the widening of Gloucester Street, and another portion (some of it back land), containing $589\frac{1}{2}$ square yards, has been sold for the new St. Mary's Hospital, proposed to be erected at the corner of Gloucester Street and Oxford Street. The disposal of these plots realised a sum of £2,663. 18s. 1d., and left the Committee with $4,237\frac{1}{2}$ square yards of land for their own purposes; 2,475 square yards of this are being utilised for the buildings and stores connected with the first installation of hydraulic power, 1,762 $\frac{1}{2}$ square yards remaining for future extensions as may be found necessary.

The contracts that have been let comprise that for five steel Lancashire steam boilers, 7 feet 6 inches diameter, 30 feet long, fitted with mechanical stokers, economisers, and coal conveyers, &c., supplied by Messrs. Yates and Thom, of Blackburn; four sets of pumping engines, each set capable of delivering 230 gallons of water per minute against an accumulator pressure of 1,120lbs. per square inch, with a steam pressure of 120lbs. per square inch when running at a piston speed not exceeding 240 feet per minute; and two accumulators with rams 1 foot 6 inches diameter, and 23 feet stroke. The engines and accumulators are the work of the Hydraulic Engineering Company Limited, Chester.



HYDRAULIC POWER.—INTERIOR OF ENGINE HOUSE.

The foundations and the concrete beds for the engines, boilers, and seatings, and also the chimney, have been completed by Mr. Dennis, contractor, of Bury, the superstructure being erected by Messrs. W. Southern and Sons, of Salford.

The District of Supply, as at present laid out, is bounded in a westerly direction by the River Irwell; in a southerly and easterly direction by the River Medlock, Albion Street, Gloucester Street, and Whitworth Street; in an easterly direction by London Road, Piccadilly, and Newton Street; and in a northerly direction by Great Ancoats Street, Swan Street, Miller Street, and Victoria Station, within which area a minimum pressure of 1,000lbs. to the square inch will be maintained in mains of 6, 5, 4, 3, 2, and 1½ inches diameter.

As the demand for the power extends, balancing accumulators will be erected in other parts of the City in order to maintain the power in the mains at a uniform pressure.

This pressure can, by means of an "Intensifier," be increased by the individual consumer to any extent that may be needed for packing. Lifts, hoists, and cranes can be worked by direct pressure from the mains.

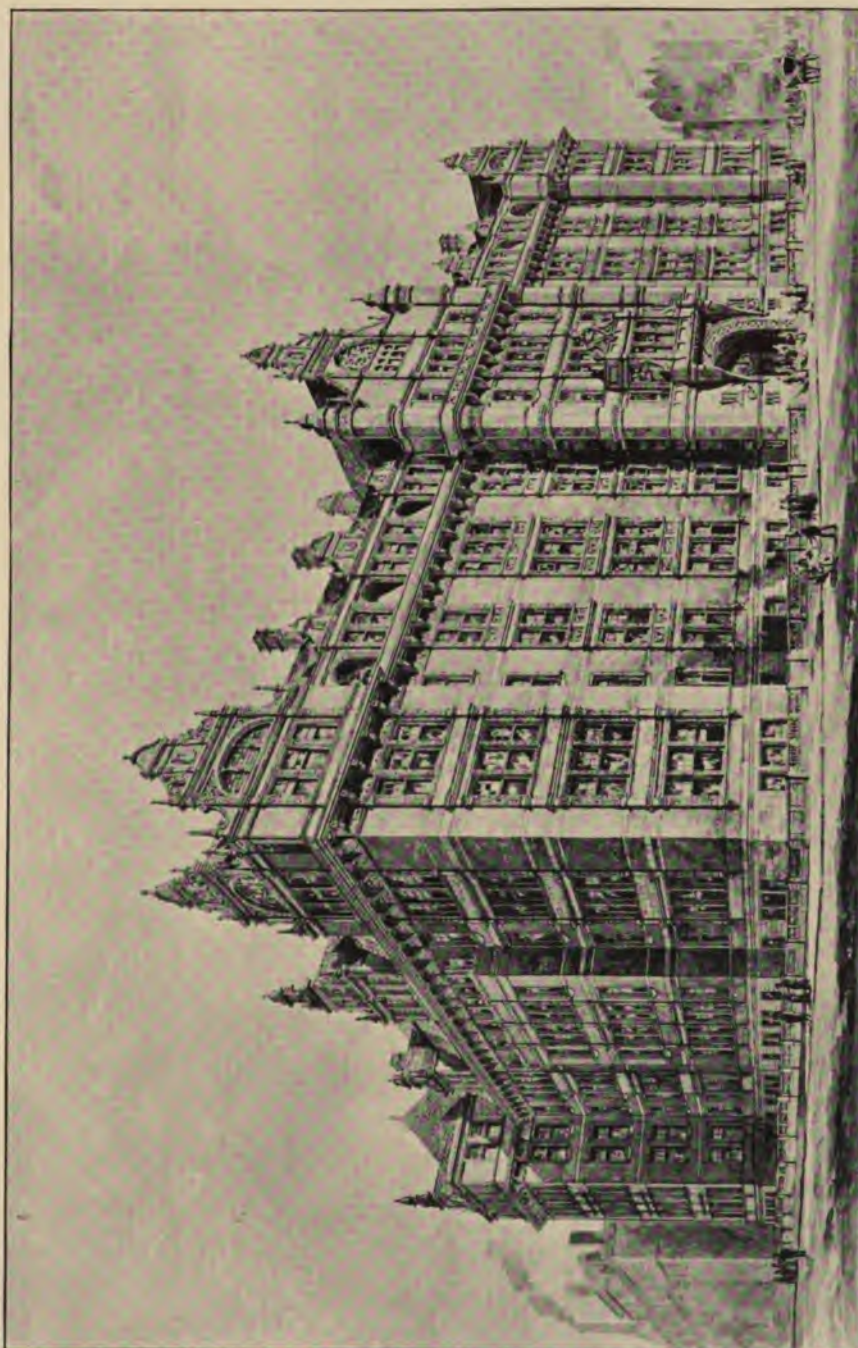
It is proposed to give the supply constantly day and night for every day in the week, including Sundays and holidays, so that it will be available at all times for all classes of consumers.

The power water will be measured to consumers through meters after the pressure has been exhausted. The charges for same are made on a graduated scale, according to the quantity of power water used.

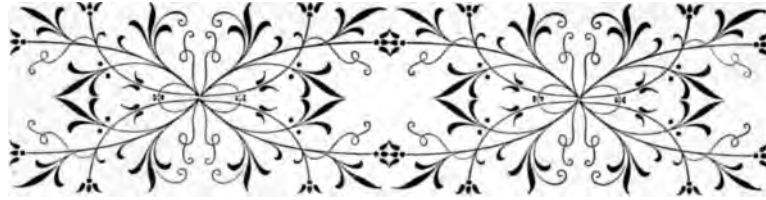
Arrangements will be made for exhibiting, at the Pumping Station, various classes of machines, lifts, hoists, and other mechanical appliances worked by hydraulic pressure, in order that the public may have the opportunity of seeing the power in actual use, which it is hoped will be some guide to them in connection with their own requirements.

The completion of these works is one of the many important undertakings that will render the year 1894 memorable in the annals of Manchester.





NEW TECHNICAL SCHOOL.



Adoption by the Corporation of the Act for Promoting Technical Instruction.



THE Bill for the Promotion of Technical Instruction in England and Wales became law in August, 1889; and on February 14th, 1890, a deputation from the recently-established Association for the Promotion of Technical Education in Manchester, Salford, and District, introduced by its President (Mr. Oliver Heywood), waited upon the General Purposes Committee of the City Council with a Memorial, praying that the Council would adopt and put into operation the provisions of the Act.

The General Purposes Committee favourably received the prayer of the Memorialists, and adopted a resolution recommending the Council to appoint a Committee to consider the provisions of the Technical Instruction Act of 1889, and to report thereon as early as convenient to the Council. The recommendation of the General Purposes Committee was approved by the Council at its meeting of the 5th of March, 1890, and, in accordance therewith, a Committee composed of the following members was appointed:—The Mayor (Alderman Mark), the Deputy-Mayor (Alderman Batty), Aldermen Sir John J. Harwood, Hopkinson, Joseph Thompson, Windsor, Councillors Andrews, Boddington, Brooks, Hoy, Milne, Rawson, Schou, Southern, and S. Chesters Thompson. The Committee met on the 10th of March, 1890, and appointed Councillor Hoy as its Chairman. After full consideration of the provisions of the Act, and of the proceedings of the General Purposes Committee

of the 14th February, the following resolutions were unanimously adopted, and presented to the Council as the report of the deliberations of the Committee:—

(1) That, in the opinion of this Committee, the provisions of the Technical Instruction Act, 1889, are readily applicable to the wants of the City, and would prove highly advantageous to its commercial and industrial interests, and they strongly recommend the Council to bring into operation the provisions of the Act forthwith.

(2) That, in the opinion of the Committee, it is desirable that the Council should adopt a resolution appointing this Committee as a Special Committee for the purposes of, and with authority to carry out the provisions of, the Technical Instruction Act, 1889.

The report was duly considered by the Council at its meeting of the 2nd of April, and adopted; and the Special Committee of the 5th of March was reappointed, with authority to carry out the provisions of the Technical Instruction Act, 1889.

The Committee held its first meeting on the 24th April, 1890, when Councillor Hoy was appointed Chairman, and Alderman Mark Deputy-Chairman. The City Treasurer was instructed to include in the estimates of the year ending March 31st, 1891, for the purposes of the Committee, the sum of £4,000; and arrangements were made and forms of application prepared inviting duly qualified institutions to apply for aid under the Acts, and with the approval of the City Council the following grants were made in the years respectively named:—

	1890-91	1891-92	1892-93	1893-94	Representatives of City Council.
	£	£	£	£	
Manchester School Board	1,000 ...	3,600 ...	3,600 ...	3,500 ...	—
The Owens College .....	... ..	1,000 ...	1,000 ...	1,000 ...	2
Manchester Technical School and Mechanics' Institution	2,000 ...	4,000 ...	— ...	— ...	5
Manchester School of Art	500 ...	750 ...	— ...	— ...	2
Manchester Grammar School	250 ...	250 ...	250 ...	250 ...	1
Lower Mosley Street Evening Classes..	200 ...	300 ...	300 ...	300 ...	2
Dob Lane School, Newton Heath	40 ...	100 ...	100 ...	100 ...	1
School of Domestic Economy and Cookery	— ...	100 ...	150 ...	150 ...	1
Manchester Commercial Schools (not paid—School closed).....	50 ...	50 ...	— ...	— ...	1
Christian Arts and Crafts School	— ...	50 ...	50 ...	— ...	1
Manchester and Salford Practical and Recreative Evening Classes.....	— ...	125 ...	125 ...	125 ...	1
The University Extension Association	— ...	100 ...	— ...	— ...	1
The Union of Lancashire and Cheshire Institutes.....	— ...	— ...	100 ...	100 ...	1
Catholic Collegiate School	— ...	— ...	50 ...	50 ...	1
	£4,040 ...	£10,425 ...	£5,725 ...	£5,575 ...	

In response to representations made by the City Council, the Science and Art Department, on September 23rd, 1890, sanctioned certain subjects of instruction bearing upon the commerce and industries of the City of Manchester (under Clause 8 of the Technical Instruction Act), in addition to those included in the Science and Art Directory.

The grant of £4,000 to the Technical School in 1891-92 included a grant of £1,500 for the establishment of a School of Electrical Engineering in Whitworth Street, which has been most successfully carried out, and has provided a means of practical instruction in Electrical Engineering equal to any facilities available outside the Metropolis.

In addition to the members of the City Council, the following gentlemen were added to the Committee in accordance with the arrangements accepted on the transfer, by the Manchester Whitworth Institute, of the Manchester Technical School and the Manchester School of Art to the Corporation :—

Mr. Thomas Gair Ashton	Sir Joseph Cocksey Lee
Mr. John Craven	Mr. Charles Edward Lees
Mr. Edward Donner	Mr. Ivan Levinstein
Mr. F. W. Follows	Mr. Hans Renold
Mr. Francis Godlee	Dr. A. W. Ward
Mr. Harold Lee	Mr. Joseph Waterhouse

Scheme of Scholarships and Exhibitions.

Under the provisions of the Technical Instruction Amendment Act of 1891, the Committee considered and recommended the following Scheme of Scholarships and Exhibitions of the total value of £3,180, tenable at various institutions in the City for two years, which the Council adopted on the 5th August, 1891 :

The Owens College.....	Four Day Scholarships, each of the annual value of £60 (for three years); and 10 Evening Exhibitions, each of the annual value of £15.
Manchester Technical School	27 Day Scholarships, each of the annual value of £30; and 18 Evening Exhibitions, each of the annual value of £5.
Manchester Grammar School	Six Scholarships, each of the annual value of £25.
Manchester School of Art	Five Scholarships, each of the annual value of £30.

The object of the Committee in establishing these Scholarships is to give assistance to deserving and capable students, whose circumstances might otherwise preclude them from the pursuit of more advanced studies.

The following is a statement of the number and value of the Scholarships and Exhibitions at present in force:—

	£
11 Owens College Scholarships.....	660
7 Owens College Exhibitions	90
38 Municipal Technical School Scholarships.....	1,140
5 Municipal Technical School Exhibitions	40
10 School of Art Scholarships	300
5 School of Art Exhibitions.....	50
12 Grammar School Scholarships.....	225
<u>88</u>	<u>£2,505</u>

Visit to Technical Schools on the Continent.

In view of the heavy responsibility which the duties imposed by the Technical Instruction Act laid upon the Committee, and the desirability of gaining the best information available as to the scope and methods of Technical Instruction in Continental Schools, the Committee sought and obtained the sanction of the Council to appoint a deputation to visit the chief centres of Technical Instruction on the Continent; and in July, 1891, this deputation, with Councillor Hoy as Chairman, visited the Technical Schools and Institutions of Berlin, Chemnitz, Stuttgart, Zurich, Winterthur, Mulhausen, Vienna, Lyons, Paris, Roubaix, and Lille. The results of this visit, which served strongly to confirm in the minds of the deputation all that had been so constantly set forth as to the scope, methods, character, and equipment of the Science, Art, and Technical Schools and Colleges of the Continent, were embodied in a report of 25 octavo pages, which was presented to the Council on the 22nd October, 1891. The report, which will be found in the proceedings of the City Council, was accompanied by numerous photographs of the chief Continental Schools which the deputation visited, attracted much attention and favourable comment, and was largely quoted in the various journals devoted to the promotion of Technical Education.

The Manchester Whitworth Institute.

In a memorandum *re* Technical Education issued by the Chairman of the Technical Instruction Committee (Councillor Hoy) on the 15th

June, 1891, attention was gratefully called to the important work hitherto carried on by the Technical School and the School of Art, in the promotion of Technical Teaching and Training in the application of Science and Art to Industry, and the feeling was expressed that the existence of these institutions might obviate the necessity of doing what other towns have had to do, namely, to found schools in direct connection with the City Council.

It was soon abundantly clear that the demands upon the City Council, if the Technical School was to be maintained and developed in full efficiency, must of necessity increase. On the other hand, the Governors of the Manchester Whitworth Institute, to which body the Technical School and the School of Art had been transferred, felt that since provision had been so largely made by Parliament for the promotion of Technical Education, it had become practically impossible for them to raise independent funds from private donors to enable them to provide such buildings and equipment as the provision for efficient Technical Instruction for the district would require. Meetings of the Governors of the Institute were accordingly held on the 8th October and on the 25th November, 1891, when resolutions were adopted to transfer to the Corporation the Technical School and the School of Art respectively, with lands, buildings, and other property belonging to them, conditional upon the Corporation undertaking to maintain these schools, and to erect new buildings for their further development.

The properties included in the proposed transfer were:—

1. The land bounded by Whitworth Street, Rifle Street, Granby Row, and Sackville Street, as a site for a new Technical School, containing 5,549 square yards.
2. The land and buildings in Peter Street, now occupied as a Weaving School, containing 975 square yards, subject to a chief rent of £28. 1s. per annum.
3. The land and buildings in Princess Street known as the Technical School, containing 920 square yards, subject to a chief rent of £41. per annum.
4. The land and buildings in Cavendish Street known as the School of Art, containing 3,273 square yards (free of chief rent), of which one-third is covered by buildings.
5. A chief rent at Beswick, belonging to the Technical School, of the value of about £4. per annum.
6. Endowments belonging to the School of Art amounting to £3,700, the proceeds to be used for Scholarships and Prizes.

To these were added sums of money amounting to £13,434. 14s. 11d. and £10,194. 14s. 10d., proceeds from the Royal Jubilee Exhibition,

including interest, lying to the credit of the Technical School and the School of Art respectively for building purposes. In addition, the Legatees of the late Sir Joseph Whitworth engaged to give a sum of £5,000. as a contribution towards the New Building Fund. The proposals of the Governors of the Whitworth Institute, which included a suggestion that a certain number of Governors of the Institute should be nominated upon the Committee of Management, were submitted to the City Council on October 28th and on December 2nd, and were remitted to the Technical Instruction Committee for consideration and report. The Committee, after prolonged deliberation and enquiry, reported favourably upon the proposed transfer, and in a report dated January 21st, 1892, recommended the Council to accept the generous offer of the Manchester Whitworth Institute, being of opinion that a Technical School worthy of the position of Manchester could be erected on the Sackville Street site (which, together with the Peter Street building and site, was originally the munificent gift of the Whitworth Legatees), and that solid advantage would accrue from the opportunities of development which a large and efficient Technical School and School of Art under municipal control would give. The recommendations of the Committee were duly considered by the City Council at its meeting of the 3rd February, 1892, and approved, and the Committee were authorised to carry them into effect. The arrangements for transfer were entered upon and duly completed on March 24th, and on March 31st, 1892, the Corporation entered into full possession and control of the Technical School and the School of Art. Sub-Committees were appointed for the management of the Technical School and the School of Art respectively, as well as Sub-Committees for Audit and Grants and New Buildings; and Mr. J. H. Reynolds was appointed by the City Council, Director and Secretary of Technical Instruction. It was resolved that the institutions now brought under the control of the Corporation should be styled respectively the Municipal Technical School and the Municipal School of Art. The number of individual students in these schools in 1892-3 was 3,731.

New Technical School Building.

The report of the Technical Instruction Committee of January 21st, 1892, stated that one of the main objects and purposes of the transfer of the Technical School from the Manchester Whitworth

Institute to the Corporation, and the assignment of land in Sackville Street, was that the Corporation should erect and equip thereon a new Technical School. On the 3rd February, 1893, the City Council authorised the Technical Instruction Committee to carry out the recommendations contained in their report, which included the erection and equipment of a new Technical School on the site provided in Sackville Street, to which a large addition had been made by closing and annexing Rifle Street. Subsequently, a strip of land along the whole length of the north side of Rifle Street was added by the free gift of the Whitworth Legatees. Instructions to architects were prepared, and on 22nd April, 1892, advertisements were issued, inviting architects to send in designs in competition for the new Technical School. Premiums of £200, £150, £100, and £75, were offered. With a view to assist the Committee in the adjudication of the plans submitted, the services of Mr. Alfred Waterhouse, R.A., were engaged. On the 7th December, 1892, the City Council, on the recommendation of the Technical Instruction Committee, appointed Messrs. Spalding and Cross, of London.

On the 7th January, 1893, the Corporation authorised an application to the Local Government Board for power to borrow £150,000. for the erection of the new building and other purposes of the Technical Instruction Acts, and an inquiry with this object was held in the Town Hall on March 7th, before Mr. S. J. Smith, C.E., the Inspector of the Local Government Board, which department intimated their approval of the proposal so far as related to the sum of £100,000, the estimated cost of the buildings, leaving the sum required for furniture, fittings, and equipment until a later date, when more precise particulars can be given as to the nature of the items included under these heads.

The Relation of the Technical Instruction Committee, Manchester, to the Towns and Districts outside the City in respect of the Provision for Technical Instruction in the Institutions controlled by the Committee.

The Committee have frequently had under discussion the question of the duty of the districts outside the City to contribute towards the cost of the instruction of residents therein who attend its schools. The Technical Instruction Committee of the Cheshire County Council

have from the first recognised their responsibility in this respect, and have arranged to pay a capitation fee of 15s. per head on all students attending the Technical School and School of Art who reside in the Administrative Districts of the County. For 1891-92 the Committee paid the sum of £72. 15s., and a claim for the year 1892-93 is awaiting settlement. The Stretford Local Board also undertook to pay a capitation fee of 10s. per head in the case of all students residing in Stretford, if attending the Municipal Technical School or Municipal School of Art in subjects not provided for in the scheme of the Local Board. The Technical Instruction Committee of the County Borough of Salford further informed the Committee, that they were prepared to make a grant to the Manchester Corporation of the sum of £150, in respect of the students from Salford attending the Manchester Municipal Technical School during the Session 1893-4. In calling attention to this subject the Committee desired most fully to recognise the mutual interdependence of Manchester and the towns and districts surrounding it. The interests of the vast industrial community surrounding Manchester are one with the City itself. Each is equally concerned in the maintenance of the well-being, and in the development, as well as in the increase of the variety, of the trades and manufactures of the district; and, so far as a complete technical training will promote these objects, the City is prepared to offer facilities such as can alone be provided by a municipality with ample resources.

The Municipal School of Art.

The Sub-Committee for the management of the Municipal School of Art was constituted on April 21st, 1892, with Councillor J. D. Milne as Chairman and Mr. Edward Donner as Deputy-Chairman. Subsequently, upon the resignation of Mr. Milne, Councillor Rowley was appointed Chairman.

The resignation of the Head Master, Mr. Willis, led the Committee to give serious consideration to the question of the best measures for the control of the Art instruction carried on by the Committee. After much enquiry, and with a view to the concentration of the instruction and training of all the Art students attending the schools of the Committee in Cavendish Street, the Committee entered into negotiations with Mr. Walter Crane, who undertook to accept, as a provisional

arrangement, the position of Director of Design, and in conjunction with Mr. Richard Glazier, who was appointed head master, formulate the school studies, spend a considerable time at the school during each term, and be at the service of the Committee for consultation on all matters relating to Art teaching, especially in its application to industrial pursuits. The number of students under instruction in 1892-93 was 377. For the present session 480 have been enrolled.

The Municipal Technical School.

The Sub-Committee for the management of the Municipal Technical School was constituted on April 21st, 1892; and on the 27th April, at a meeting of the newly-formed Committee, Councillor Harry Rawson was appointed Chairman, and Mr. Francis Godlee Deputy-Chairman of the Committee. The course of instruction for the session 1891-92 was nearly completed, and it was not until the commencement of the session for 1892-93, in September, that the Committee could actively direct the future policy and operations of the school. In July, 1892, the Sub-Committee deliberated upon the question of the aims of the Technical School and of its relation to other institutions, and submitted the following declaration, which received the approval of the General Committee:—

The principal object of the Municipal Technical School is to provide instruction in the principles of those sciences which bear directly or indirectly upon our trades and industries, and to show by experimental work how these principles may be applied to their advancement.

The aim of the school is distinct from that of the University Colleges, inasmuch as it is designed to teach science solely with a view to its industrial and commercial applications, and not for the purposes of educating professional scientific men. It, however, offers to students of the University Colleges the opportunity of technical instruction in the industrial applications of certain branches of science.

The Technical School requires that all its day students must possess, on entrance, a sound general education, and it must therefore look for its supply of suitably-prepared students to the grammar schools and other secondary schools, and to the higher grade elementary schools.

The school also provides evening lectures and laboratory and workshop practice for apprentices, journeymen, and foremen, in the scientific principles underlying their respective trades and industries, and especially aims to bring to their knowledge newly-discovered processes and methods for the purpose of improving any special trade, or of introducing new branches of industry.

With a view to improving the means of practical instruction in the Dyeing Department, large additions have been made to the appliances, and the practical work can now be done with greater advantage than formerly.

Seventeen Scholarship students have been sent to the school by the authorities of districts and institutions outside the City.

The question of the transfer to the School of Art, Cavendish Street, of the Art Instruction so long and so successfully carried on in the Technical School, under conditions anything but favourable to satisfactory work, received the earnest consideration of the Committee. They recognised the great advantage and necessity of associating Art and Science instruction in intimate relation, but the peculiar circumstances under which the Committees of both schools were placed led the Committee of the Technical School to the conclusion, that the interests of Art instruction would for the present be best served by carrying it on in the Cavendish Street School, with the proviso that arrangements for Industrial Art Instruction be made wherever needful in the Technical School. The total number of students in attendance at the Technical School for the session 1892-93 was 3,354.

With a view to meet the requirements of the certificate for Sanitary Inspectorships, granted by the Victoria University, and the Intermediate Examinations for the Associateship of the Royal Institute of British Architects, special courses of instruction were arranged for the session 1893-94, the latter at the request of the Manchester Society of Architects (Incorporated).

The staffs of the Municipal Technical School and the Municipal School of Art comprised 70 persons engaged in teaching, and 48 in the various technical departments and in the general administration, of whom 71 are in the exclusive service of the Committee.

Newton Heath and Openshaw Science and Art Classes.

On February 19th, 1891, the Committee made application to the Town Hall Committee to permit the use of the rooms in the Newton Heath Public Buildings, already designed for Science and Art Classes, for the purpose of this Committee, which was granted, and instructions were given to fit up and equip the rooms for the teaching of Machine Drawing, Chemistry, Cookery, Laundry Work, and Elementary Art. This has been effected at a cost to this Committee of £464. 14s. 2d. It was ultimately arranged that the cost of the portion of the building assigned for the purposes

of Technical Instruction should be defrayed by this Committee. A sum of £1,800. has accordingly been paid, and the Science and Art class rooms have become part of the assets of the Committee. For many years the Technical School has carried on Science Classes in Openshaw, in rooms kindly lent by the Manchester and Salford Co-operative Society Limited. When the proposals for the erection of a Free Library at Openshaw were under consideration, suggestions were made that accommodation should be provided for the aforesaid classes. These suggestions were accepted, and plans prepared accordingly, the Technical Instruction Committee undertaking to pay £1,500, that being the estimated cost.

The Need for the Co-ordination of Educational Effort.

The funds appropriated by the City Council have been the means of materially increasing the supply and assisting the development of Technical Instruction within the City. Yet this very development has shown the need for a systematic co-ordination of the work of the various agencies engaged in providing Technical Instruction, and the time seems opportune to suggest that careful consideration should be given to this important matter. An understanding is more especially desirable as to the provision to be made for Advanced Technical Instruction where the students are necessarily limited in number, and the appliances and teaching power are of a costly character, as well as in cases where exceptional facilities are provided for special subjects. The anomalies in respect of the fees charged in the various institutions need consideration and revision. A more complete accord amongst the various institutions as to the courses of study, fees, and other arrangements would greatly assist the object all alike have in view, namely, the provision of efficient instruction readily accessible to all classes of the community, in all subjects likely to promote the industrial and commercial prosperity of the district, and the Committee have arranged for the appointment of a Joint Representative Committee to consider the question in all its bearings, to meet in the present year.





The SeWage Scheme.



THE great work for the prevention of the pollution of the rivers and streams of the City of Manchester, and the purification of its sewage, has occupied the attention of the Council and Rivers Committee for a long series of years.

Great floods in the River Medlock occurred in the years 1857 and 1872. Not only did mill owners suffer, but many houses of the poor were invaded by the offensive and unwholesome liquid. There was the danger of a possible recurrence of the flood, and property owners began to ask themselves seriously whether they dare remain and warehouse their goods in buildings that they had hitherto thought secure.

The River Medlock Committee was enlarged, and was instructed to report what action was desirable and practicable for the removal of the obstructions which existed in the rivers Medlock and Irk; and steps were taken with a view to remedy the inconveniences felt.

The City Council on 7th October, 1874, appointed the following Sub-Committee (known as the Rivers Pollution Sub-Committee), consisting of Alderman Hopkinson, Councillors J. A. Birch, Craven, Croston, Schofield, Joseph Thompson, Townsend, and R. T. Walker, to consider and report on the best means to be adopted for preventing the pollution of the rivers Irk and Irwell. The work of this Sub-Committee ultimately merged in that of the Rivers Committee.

Meanwhile the River Medlock Committee had not been idle. They had been gathering their facts together, and on November 16th, 1874, presented their report to the Council, in which they detailed what in

their view was needed for "the purpose of lessening the danger of destructive floods in the River Medlock," and, after much consultation with the then City Surveyor (the late Mr. J. G. Lynde), they reported that in their opinion it would be necessary:—

- (1st) To raise the hundred and county bridges which span the Medlock;
- (2nd) To remove the weirs which hinder the free flow of the water, and to cleanse the bed of the river by the removal of the accumulated rubbish;
- (3rd) To provide a sufficiently large outlet from Knott Mill to the river in Dawson Street; and
- (4th) To arrange for lowering or otherwise altering the weir across the Irwell at Throstle Nest.

These were but preliminaries. Some of them have been carried out with marked success. Thus, one or two weirs have been removed, others have become "tilting" weirs, that is, they have been so admirably balanced that whenever the water rises above a certain height the weirs open automatically, and the flood finds an escape at the lowest point. Another great improvement was the alteration and enlargement of the "swallow" at Knott Mill. The Bridgewater Canal Company had acquired a right to impound water at Knott Mill to turn its water-wheels and to fill its canal. In ordinary times this worked well, but at those times when the river suddenly rose—and it is liable to freshets—the impounded water could not get away, and floods supervened.

It was suggested that tunnels should be constructed to cut off the bends of the river and to be used in time of flood. The expense of construction and of compensation to owners of property would be large. The bold scheme was therefore devised of making a great storm channel from Pin Mill Weir to Throstle Nest Weir, thus leaving the ordinary flow to continue in the existing river bed, whilst the storm water was carried beyond the City. Although the outlay upon such a scheme would be large, it was claimed that the plan would be effective, and that it would eventually save a very considerable expenditure when the improved sewerage of the City, in connection with the pollution of the rivers, had to be dealt with, which would not be the case with any other plan that had been suggested. It was part of the plan that provision should be made for separating the sewage from the flood water, which could then be dealt with at Throstle Nest or lower down the river.

The tunnel was to be made of such a depth as would allow it to receive the sewage of the City, whenever that question came to be dealt with. It would enable a new street to be formed over the proposed tunnel from Downing Street to Pin Mill, and thus give direct communication from Hulme and Chorlton to Ancoats and Ashton Road. The length of the tunnel would be about three miles, with a fall of 48 feet; the size of the tunnel would be 20 feet diameter; and the cost about £200,000.

The Council was aghast at the proposal, and at a special meeting held December 9th, 1874, it was referred back for reconsideration, and was practically declined.

The Committee, notwithstanding this discouragement, diligently pursued their enquiries as to the best mode of treating urban sewage, and obtained a detailed report from Mr. John Frederic Bateman, C.E., and the then City Surveyor (Mr. J. G. Lynde), and the Committee reported fully to the Council on 5th September, 1877, and suggested that they should be authorised to communicate with the various local authorities interested, and also with the Local Government Board, with a view to carrying out the works described and recommended in the report. The Council authorised the Committee to confer with the local authorities.

In November, 1877, the River Medlock Improvement Committee assumed the title of "Rivers Committee." A Conference was held in the Town Hall on 28th November, 1878, whereat fifteen local authorities were represented, and the following resolution was passed:—

That the cost of constructing the main outfall sewer and the necessary intercepting sewers, together with the structural works requisite for dealing with the maximum quantity of sewage to be provided for from each township, including the City of Manchester, should be defrayed by the contributions of the several districts interested in such drainage, in the proportions of the maximum quantities of sewage provided for at, and below, the several points of discharge from the several districts.

And further, that the cost of maintenance of the main outfall sewer and the intercepting sewers before mentioned, together with the maintenance and working expenses of the sewage works constructed for dealing with the sewage, should be based upon the proportional average quantities of the sewage discharged by each district, to be from time to time, by gauging or otherwise, ascertained or determined.

Subsequently, on the cost being apportioned, several of the local authorities withdrew their adhesion to the scheme, and on the 15th

October, 1879, the Council approved of the Rivers Committee abandoning the idea of a joint drainage scheme.

But a force was about to be created that proved irresistible. The idea took possession of the local mind to form a great highway to the sea, and the Corporation favoured the scheme. When that scheme (which has now reached maturity as the Manchester Ship Canal) came definitely before the Council, the Chairman of the Rivers Committee (Alderman Joseph Thompson) said he was prepared to give it his hearty support; but he warned the Council that if it were ever carried out it would be imperative to adopt a comprehensive scheme for the interception and filtration of the sewage of the whole City. Public opinion had grown in favour of the streams being purified, and a very general feeling prevailed in favour of the formation of the Canal; there was therefore no opposition to the Rivers Committee being allowed to prepare a report.

The Committee presented their first report on 4th February, 1885, in which they described the results of their inspections of the systems of sewage disposal carried on in various towns, and they then received the authority of the Council to make further enquiries, and report as to the land which could be obtained at a reasonable rate, together with the particulars of the scheme to be adopted for the complete interception of the drainage of the City. The Committee continued their investigations, and directed their attention in particular to the sewage works at Sheffield and Leeds, and they presented a report to the Council, dated April, 1887, in which they expressed their opinion that the Leeds system, in the main, was the best guide for Manchester to follow. They obtained samples both at Leeds and Sheffield of—

- (1) The raw sewage.
- (2) The sewage when mixed with lime.
- (3) The effluent.

These were submitted for analysis to Professor Dixon, M.A., F.R.S., Professor of Chemistry at Owens College, and his analysis was appended to the report. The City Surveyor (Mr. John Allison, C.E.) presented a detailed scheme to the Rivers Committee on 17th May, 1886, and the Committee took the advice of Mr. J. Bailey Denton thereon, and he practically supported Mr. Allison's scheme.

The Committee estimated the works would cost about £500,000. This detailed report was submitted to the Council on 13th July, 1887, when they adopted the scheme, and passed the following resolution:—

That this Council (understanding that a further opportunity will be given them for the consideration of the details of the scheme) approve generally of the recommendations made in the report now read as regards the disposal of the sewage of the City. That the Committee be authorised to conclude the arrangements for the purchase of the land and rights referred to in their report, and also to make all necessary arrangements with the Manchester Ship Canal Company, and to hold communications with and take action as regards other local authorities, and also to make application to the Local Government Board to hold a local inquiry, and grant the necessary legal powers under the Public Health Act 1875.

It then became necessary to obtain suitable land, and the committee entered into negotiations with Sir Humphrey Francis de Trafford, and on 22nd February, 1888, the Council authorised the Rivers Committee to apply for borrowing powers for the purchase of the land at Davyhulme, containing about 95 acres, and for the construction of the outfall, intercepting and storm overflow sewers and tanks, and other necessary works.

The prescribed formalities having been carried out by the Town Clerk, the Local Government Board deputed Mr. Samuel Joseph Smith, C.E. (one of the Board's Inspectors), to repair to Manchester, and on 10th September, 1888, he commenced a very exhaustive inquiry at the Town Hall. Mr. John Addison, Q.C., M.P., represented the Corporation, and counsel and witnesses were heard during fifteen days. Opposition was in the main offered by Dr. Pankhurst, on behalf of the Barton, Eccles, Winton, and Monton Board; by Mr. Edge, on behalf of Stretford; by Mr. Washington Heywood, on behalf of Newton Heath; and by Mr. Henry Thomas Crofton, as representing Moss Side.

The late Dr. Charles Meymott Tidy, Dr. Frankland, Dr. Whiteside Hime, Mr. James Mansergh, C.E., and other eminent engineers and scientific witnesses were examined on behalf of the Corporation, and ultimately on 16th March, 1889, the Local Government Board approved the scheme submitted to them by the Corporation, with certain slight modifications. On the 3rd April, 1889, the Council instructed the Rivers Committee to carry out the scheme.

The Corporation determined to convert Manchester into a water-closet town, and the present drainage scheme, which is rapidly

nearing completion, is the outcome of that decision. At present the whole of our domestic sewage, with the exception of that removed by the pail-closet system, finds its way by the street sewers into the various rivers and streams which flow through the City; and the scheme now being proceeded with is an intercepting scheme, whereby the new main sewers are, as far as practicable, carried along the valleys at such depths as to intercept the existing sewers and convey all the sewage into one main outfall and thence to the sewage works on the westerly side of, and about five miles distant from, the City.

In designing and finally settling the main features of the scheme the cardinal object was to avoid, if possible, pumping, and this has been accomplished, so that the whole drainage of the extended City will eventually find its way by gravitation to the outfall works. Commencing with the outfall sewer at the works, there is a 10-foot circular sewer, constructed in three half-brick rings, set in Barrow hydraulic mortar, the invert to half springing height being formed of blue brick, and the remainder in good, sound, common bricks. This sewer extends for a distance of about 4,259 lineal yards towards the City, and the greater portion of it has been done in open cutting, one-half the length being about 15 feet in depth to the invert, while the remaining length nearer to the City is at a depth of from 18 feet to 35 feet. At the point where this sewer terminates, a storm overflow chamber has been constructed, as, owing to the very flat character of the district, only a very small percentage of the storm water can be got rid of before reaching this point. This chamber serves a double purpose: first, by relieving the sewer of a large volume of storm water in time of flood, and consequently reducing the amount to be dealt with at the tanks; and secondly, it has enabled a smaller-sized sewer (10 feet in diameter) to be used between the chamber and the precipitation works. The storm overflow chamber measures 51 feet 6 inches by 27 feet, and a crest or weir is formed the full length along the side of the sewer, so that in time of flood all the storm water delivered by the larger sewer when running at a depth of more than 6 feet 4 inches will overflow and find its way along the storm overflow to the Ship Canal, below the Mode Wheel locks, where the surface of the water in the canal is lowered to the extent of 13 feet. The water passing along the storm

overflow being so largely diluted in time of flood will be allowed to be passed into the canal without chemical treatment. In the construction of the 10-foot sewer, few difficulties were encountered except in carrying it under the Bridgewater Canal at two different points, and in both cases the work was done in open cutting. In order to enable the canal traffic to be carried on continuously, the work in each crossing was done in two sections by means of cofferdams, and it was found necessary to widen the canal temporarily in order to obtain sufficient width for the barges to pass. Owing to there being insufficient depth between the bed of the canal and the upper surface of the work, it necessitated the construction of this portion of the sewer in cast iron, which was accomplished by the tube being cast in segments, with flanges, &c., which being bolted together formed a perfectly water-tight cylinder 10 feet in diameter.

At the second crossing under the Bridgewater Canal there was still less depth, but this difficulty was overcome by duplicating the tubes and reducing the diameter. They were cast in segments, as before described, the respective diameters being 8 feet 9 inches.

On the City side of the storm overflow chamber a much larger sewer has been constructed, and in order to avoid pumping, and to secure sufficient carrying capacity at a low level in the sewer (and also to get under three railways and various sewers), a special design had to be resorted to, so that instead of constructing a circular sewer, it has been carried out elliptic in shape, the internal dimensions being 14 feet wide by 10 feet 6 inches high. The length of this sewer from the storm overflow chamber to the City boundary in Stretford Road is about 2 miles, the depth for the entire length varying from 37 feet to 45 feet, two-thirds of it being carried out in tunnel and one-third in open cutting. All the works are constructed with similar materials to the 10-foot sewer, except that this sewer being of larger dimensions it was constructed in four half-brick rings instead of three, as before. It is perhaps necessary to mention that the ground throughout, with the exception of a few potholes of sand, was excellent, being chiefly of stiff clay; and except at the canal crossings, little or no water was found in the tunnel, the only water found being in the shafts at a depth of about 10 feet from the surface, where gravel and sand for this depth overlay the clay. In

having to cross under the three railways, special works and great precautions had to be taken, as the traffic on those three lines—viz., the Cheshire Lines for Liverpool, the main Midland London and local lines, and the South Junction lines—had all to be maintained; and notwithstanding that the upper surface of the brickwork of the sewer was within 2 feet of the sleepers, no accident took place; and although the trains had to slow in passing over the work while it was being constructed, none of them were delayed at any time. The 10-foot sewer has a gradient of 1 in 2,000, and the 14 feet by 10 feet 6 inches sewer has a gradient of 1 in 3,000. The 10 feet sewer can convey to the outfall, when fully at work and in time of flood, about 140 million gallons in 24 hours; the larger size sewer will carry to the storm overflow in time of flood about 185 million gallons in 24 hours.

At the outfall works there are 11 tanks, each 300 feet long by 100 feet wide, having an average depth of 6 feet, equal to a water area of about $7\frac{1}{2}$ acres in the tanks, and a holding capacity of $12\frac{3}{8}$ million gallons. It is intended to use sulphate of alumina and lime as a precipitant, but of course the tanks can be worked by any other precipitant which may be of a more suitable character. These tanks are constructed upon the continuous flow system; but, unlike many others constructed on this principle, each tank can be worked independently, and if all the tanks were at work simultaneously the sewage would be flowing over a crest 1,100 feet in length. In dry weather the effluent water will, after leaving the tanks, be passed over about 300 acres of land, part of which the Corporation have already secured, and which will be properly drained and used for filtration purposes. The sludge from the tanks will be conveyed into the works and dealt with in eight presses provided for the purpose, each press containing 44 chambers, with plates 41 inches square, and said to be capable of turning out $1\frac{1}{2}$ tons of cake per hour. The cost of the entire scheme now in hand is estimated at about half-a-million sterling; but as several townships have been added to the City since the scheme was passed by the Local Government Board, about £100,000. extra will be required to sewer these new districts.

The districts incorporated with the City by the extension of the boundaries of the latter in November, 1890, exhibit considerable

variation in their characteristics, from the extremely rural townships of Blackley and Moston to the thickly-populated urban districts of Newton Heath, Openshaw, and Gorton, and the more residential neighbourhood of Crumpsall. But in all cases there exists a common feature in the fact that there is a constant rise from the old City boundary to the extremities of the newly-added districts.

The natural configuration of these districts, and their relative levels to the old City, were found to lend themselves very readily to the transmission of their sewage by gravitation into the City system. An investigation into the extent and development of their internal drainage revealed the fact, as was to be expected, that the more thickly-populated urban districts, such as Crumpsall, Newton Heath, Openshaw, and Gorton, the affairs of which had been administered by Local Boards of Health, were in possession of a system of internal drainage of considerable completeness, and carried out on the lines of modern requirements; while the rural districts were practically in a virgin condition, having only isolated and disjointed lines of sewers, to the exclusion of anything like main internal drainage, discharging their contents usually into the nearest rivers or water-courses. In some instances also, it may be noted, in the urban districts, their drainage had been carried out on the principles prevailing in the adjoining City; and had even been, from the necessities of the case, connected by agreement with the City system; thus simplifying to some extent the work of interception.

Commencing on the northerly side of the City, it was found that a very large portion of the district of Crumpsall was drained by a main sewer down Crescent Road, taking the sewage from a point as far back as Cheetham Hill Road, and conveying it along with that of Lower Crumpsall down Hazlebottom Road to the River Irk at Smedley Bridge. For the interception of this district a new sewer was designed to pass under the river at this point 3 feet in diameter, intercepting also the sewer from Woodlands Road, continuing along Hazlebottom Road, and replacing the old shallow sewer in that road and in Waterloo Street, up to a point near Tetlow Bridge. From this point the sewer divided into two branches, one of which, with dimensions of 3 feet 6 inches by 2 feet 4 inches, followed the course of the river through Messrs. Levinstein's chemical works to Crumpsall Vale, taking the sewage of Delaunay's Road, Clarendon Road, &c.,

continuing 3 feet by 2 feet along the river, past the Bowker Bank Print Works, to Blackley New Road, at the crossing of the River Irk, and receiving on the way the sewage from the whole of the westerly portion of Blackley, in addition to the northerly portion of Crumpsall.

From the point near Tetlow Bridge, before referred to, a second branch, 3 feet by 2 feet, was designed to continue along Slack Road, Lion Street, and Grant Street to a point in the Middleton Road, providing for the interception of the remaining portion of the district of Blackley.

The district of Moston was, prior to its incorporation with the City, entirely drained into the Moston Brook and various water-courses, and had no connection with the City sewers. In order to intercept the sewage of this district, a new sewer was designed, commencing at Queen's Road, with a size of 3 feet 6 inches by 2 feet 4 inches, and continuing a course alongside the Moston Brook for a length of $2\frac{1}{4}$ miles.

This sewer, having in its upper portion dimensions of 3 feet by 2 feet, receives the sewage from the district of Newton Heath north of the loop line of the Lancashire and Yorkshire Railway adjoining the Monsall Hospital, the Lightbowne district near Thorpe Road, intercepting also a main Newton Heath outlet near to Dean Brook Bridge, the sewage from St. Mary's Road, Moston, and from the recently-developed district of New Moston at its upper end.

The district of Newton Heath, with a population of 31,000 and an area of 1,350 acres, was the most important district united with the City. At the time of incorporation a very large portion of its sewage was being discharged into the sewers of the City in Queen's Road, and also by means of the Shooter's and Newton Brooks, which have, owing to the developments of streets and buildings, become practically sewers. A large part of this district was thus already provided for in the City system. The sewers, however, were in some cases found to have been designed on too small a scale properly to provide for the demands made upon them, and a new middle level intercepting sewer was accordingly designed 3 feet 9 inches by 2 feet 6 inches, and eventually 3 feet 6 inches diameter, intended to discharge the sewage from a large portion of the district into the

main intercepting system near to Philips Park Cemetery and the River Medlock. At this point also the intercepting sewer receives the sewage from a very large area of the Newton Heath district by means of a main sewer traversing Cheetham Road, and bringing down almost the whole of the sewage from what might be termed the rural parts of Newton Heath.

A line of intercepting sewer, commencing in Mill Street, Bradford, near to the River Medlock, was laid out to traverse the Clayton Valley, its size being 3 feet 6 inches by 2 feet 4 inches and 3 feet by 2 feet throughout its length to the hamlet of Clayton Bridge at the extreme limit of the City. This sewer receives on its way at Bank Bridge the sewage of the larger part of the district of Clayton, the whole of the storm water from which will pass into the River Medlock at this point, and also the sewage from the Culcheth and residential parts of the Newton Heath district.

The hamlet of Clayton, which is situate in the Township of Droylsden, had at the time of the incorporation no system of drainage; and a new main sewer was accordingly laid out, varying in size from 2 feet diameter to 4 feet 6 inches by 3 feet, commencing at the boundary of the City near to Edge Lane, and continuing down Ashton New Road and Bank Bridge Lane to the intercepting sewer last described, into which the sewage is discharged, the storm water being delivered at this point into the River Medlock.

A most important and thickly-populated portion of the newly-incorporated area was that consisting of Lower Openshaw, the central portion of Gorton, and the portion of Clayton to the south of the Ashton Canal, the sewage of which was being discharged by a number of outlets into the Cornbrook or Gorton Brook and its tributary the Clayton Brook.

For this district, which with a small portion of the old City and about one-half the district of Bradford, included an area of 838 acres, a new intercepting sewer was designed, 2 feet diameter, commencing in Clayton Lane to the north of Ashton Old Road, continuing along Clayton Lane, Pottery Lane, Gorton Road, and Ashton Old Road, increasing in size to 3 feet, 4 feet, and 5 feet successively, delivering the dry weather flow of sewage into the main "A" intercepting sewer at Bridge Street, and discharging the storm waters into the River

Medlock near to Ardwick. By means of this sewer the whole of the sewage of the district of Openshaw is diverted from the rivers, as well as the large portion of Gorton which formerly discharged into the Cornbrook, along with large parts of Bradford and Clayton.

The sewage from the remaining portion of the newly-incorporated Gorton district was being delivered into the Hyde Road and other sewers of the City, requiring no new work in consequence.

The sewage from the hamlet of Kirkmanshulme was provided for by taking it into the Dickenson Road sewer of the Corporation, and a few branches dealt with other small and isolated portions. The whole of the sewage from the added townships thus intercepted from the rivers and taken down for treatment at the outfall works at Davyhulme, solving this difficulty for them with an expenditure far less than would have been required if they had, by remaining outside the City, taken upon themselves the burden of constructing works of interception and purification of their own, and with a freedom from responsibility and a certainty of good sanitation and other advantages in the disposal of flood waters, &c., which could scarcely have been possible for them had any other course been adopted.

The work has been subdivided and entrusted to several contractors.

Contracts 1, 2, and 7—The portion of the main outfall sewer, from the outfall works at Davyhulme to Crown Point, near Waters Meeting, also the storm overflow sewer down to the Ship Canal at Mode Wheel, were carried out by Messrs. Davies Bros. & Knight, of Wrexham.

Contracts 3, 4, and 5—From Waters Meeting to Pin Mill Brow, and comprising a portion of the main outfall sewer and the whole of the main intercepting sewer "A," by Mr. James Nuttall.

Contract 6—Main intercepting sewer "B," from Erskine Street, Stretford Road, to Queen's Park, Hendham Vale; and

Contract 9—Main intercepting sewers "M" and "N," from New York Street, Tipping Street, Ardwick, to Mill Street, Bradford, by Mr. Abram Kellett.

Contracts 8 and 15—The Precipitation tanks and the Filter beds at Davyhulme, by Mr. George

Contract 10—The necessary buildings for the mechanical plant and offices, by Mr. James Byrom. The machinery and sludge presses have been supplied by Messrs. Manlove & Alliott, of Nottingham.

Contracts 11, 12, and 13—Main intercepting sewers "G," "H," and "M 1," by Messrs. Perkins, Graham, & Company Limited.

These contracts have been carried out by the respective contractors, with one slight exception, with the most perfect good feeling towards the Rivers Committee and their officials.

[*Memorandum.*]

LIST OF OFFICIALS CONNECTED WITH THE WORK.

Engineer-in-Chief:—John Allison, Esq., M.Inst.C.E., City Surveyor.

Resident Engineer :—Wm. Thos. Olive, Esq., M.Inst.C.E.

Assistant Engineers :—Outside Staff: Messrs. R. M. Gloyne and W. Cooper, Assoc.Mems.Inst.C.E. Inside Staff: J. W. Welch, Assoc.M.Inst.C.E., and George Meek. Sewage of Outside Districts : J. P. Wilkinson, Assoc.M.Inst.C.E.





Workmen's Dwellings.

DURING the year 1893, the Sanitary Committee of the Corporation were able to commence the erection of two blocks of labourers' dwellings, for the accommodation of persons displaced by the removal of insanitary houses.

The public improvements, and the erection of very large railway stations in recent years, had also caused the removal of several thousands of houses, which had intensified the evils arising from overcrowding in the old parts of the City, where the streets were exceedingly narrow and the houses worn out.

The first Officer of Health (Mr. John Leigh) presented a report, dated January 1st, 1881, to the City Council, in which he demonstrated that the very high death rate of the City was chiefly due to the density of the population in those districts where the streets were narrowest and leading to courts and alleys, through covered passages, to old and dilapidated back-to-back houses, with low ceilings, damp floors and walls, rotten spouts and windows. The Officer of Health presented a second report, June 6th, 1883*, on the same subject, with further maps and details, which were followed by a third report on May 7th, 1884†, in which he deals specially with the Ancoats District. These reports aroused public attention, and created demands for immediate remedies.

The Manchester and Salford Sanitary Association memorialised the City Council, and made strong representations of the danger to the lives and health of the public if these hotbeds of disease were allowed to remain as they were.

* See Council's proceedings, page 223; † page 295.

Subsequently, Dr. Thresh published a pamphlet, describing the insanitary condition of Ancoats, and stating that the death rate ran up from 26 per thousand to an average of 50 per thousand, whilst in some courts it exceeded 80 per thousand.

In response to the public demand, the Council, on the 4th of February, 1885, appointed a Special Committee—afterwards designated “The Unhealthy Dwellings Committee”—with instructions to enquire and report upon the dilapidated or insanitary dwellings within the City, especially such as are situated in courts approached by narrow streets and covered passages, also those in *cul-de-sac* streets, with a view to their improvement or removal; and also to recommend the purchase, on economical terms, of such as would provide sites for open spaces and playgrounds in densely-populated districts.

The Special Committee reported to the Council that, after many inspections and enquiries, they had decided, with a view to secure the co-operation of owners of cottage property, to advertise in the Manchester newspapers, inviting offers of old and dilapidated houses at reasonable prices, in order to provide open spaces in crowded neighbourhoods. The results were that ten blocks were purchased; but these being intersected with other blocks, the owners of which either would not treat, or would sell only at extravagant prices, no area of sufficient size could be secured.

Dr. Tatham, Medical Officer of Health, on 2nd October, 1889, made an official presentation and report to the Council, that the area bounded by Cornwall Street, George Leigh Street, Bengal Street, and Oldham Road, Ancoats, was an unhealthy area, that the houses within such area were unfit for human habitation, and that the evils and defects could only be remedied by an improvement scheme for the rearrangement and reconstruction of the streets and houses in the area.

The Council referred the Medical Officer of Health's report to the Unhealthy Dwellings Committee to consider and report thereon.

An improvement scheme was then prepared and submitted to the Council, which was adopted, and powers obtained from the Local Government Board to acquire the property and carry out the scheme.

An arbitrator was appointed to decide the values of the properties that could not be obtained by agreement, and eventually the Corporation acquired the whole of the properties and the land, including the streets, courts, and passages (contents, 19,271 square yards), at the cost, including all arbitration charges, legal costs, trade compensations, and chief rents (capitalised at 25 years' purchase), for the total sum of £95,270, being equal to £4. 19s. per square yard.

The Medical Officer of Health also reported the area bounded by Pollard Street, Halton Street, Chadwick's cotton mill, and Munday Street, Ancoats, to be an unhealthy area. The Council dealt with it in the same manner, and the property was acquired, which consisted of 85 back-to-back houses and 14 shops, all old and worn out. The total cost, including trade compensations and chiefs (capitalised at 25 years' purchase), and all legal costs, was £9,810, equal to £2. 2s. 6d. per square yard.

The Council then advertised for competitive designs for buildings on the two sites in Oldham Road and for the site in Pollard Street, and eventually selected those of Messrs. Spalding and Cross, London.

Tenders for the erection of buildings were then obtained, and Messrs. Robert Neill and Sons' tender, to erect the buildings in Pollard Street for the sum of £16,674. 14s. 6d., was accepted by the Council on September 7th, 1892.

The tender of Messrs. W. Southern and Sons, for the erection of buildings on No. 2 block, Oldham Road, for the sum of £45,270, was accepted by the Council on October 5th, 1892.





Parks, Open Spaces, and Playgrounds.



MANCHESTER was one of the foremost towns in England to provide parks for the benefit of the people. Immediately after the passing of the Municipal Corporations Act, the need of such places in densely-populated cities and towns was agitated; and in the report of Mr. Slaney's Commission to the House of Commons, Manchester was coupled with Birmingham and some other towns as particularly destitute. Gentlemen in this neighbourhood, anxious that effect should be given to the recommendations of the Commission, started a movement which had that object in view. In 1844, a committee of citizens, with Mr. Mark Philips at their head, joined in a request to the Mayor that a public meeting should be called. The request was granted, and at the meeting £7,000. was subscribed. This was largely added to by subsequent collections, and at length funds sufficient were in hand for the purchase of Queen's Park (30 acres), Philips Park (31 acres), and—for the movement was not confined to this side of the Irwell—Peel Park, Salford (32 acres). These various parks were laid out and handed over to the people for their use and enjoyment for ever, free of cost. The philanthropy thus manifested soon bore fruit in the improved health and habits of the people. These parks, if not considered sufficient, were at all events not added to for many years afterwards. But, in 1870, the Corporation recognised its obligation in the matter of providing additional breathing spaces,

and, having regard to the extension of the population in Hulme and Chorlton-upon-Medlock, resolved to provide a public park on that side of the City. Thus, by the purchase of 60 acres of land from Lord Egerton, Alexandra Park (one of the finest open spaces in the suburbs) was called into existence; and about the same time Ardwick Green, at that time an open space of not very sightly appearance, with a large pond down the centre, was by a resolution of the Council turned into the beautiful little park which it now is. Ten or twelve years later there arose a demand for yet more open spaces, and the need of these in the densely-populated districts of Ancoats, Ardwick, and Angel Meadow was particularly emphasised. Working independently and apart from municipal support, the Open Spaces Association, which was affiliated to the Manchester and Salford Sanitary Association, under the leadership of Mr. Herbert Philips, did some good, but it lacked the resources necessary to any large enterprise. On the 30th November, 1885, a deputation of influential citizens waited upon the Mayor (Mr. Alderman Goldschmidt) with memorials, urging the desirability of playgrounds and open spaces being acquired for the recreation of children and adults. Two sites suggested were, the unoccupied space in Campfield Market and the vacant ground in Quay Street, opposite the County Court, together with an extended use of the playgrounds attached to the Board Schools. The desirability of appropriating disused burial grounds for the purpose of open spaces was also urged. A more ambitious project which it was thought the Corporation might take up, was the suggested conversion of Birch Fields into a public recreation ground. Boggart Hole Clough, on the north side of Manchester, was also mentioned as a most desirable and picturesque "open space" worthy of being preserved. Amongst the gentlemen who joined in making these representations were Mr. Oliver Heywood, Dr. Ransome, Mr. Thomas Dickins, Mr. Neville Clegg, Dr. John Watts, and Mr. George Milner. Much sympathy was expressed with the object of the memorialists by the Mayor, and by Mr. Alderman Harwood and Mr. Alderman Grundy, who accompanied him, but the expense that would be involved in carrying out any large scheme was pointed to as a serious difficulty in face of the large expenditure which the Corporation had undertaken in providing works of more immediate necessity. Still, the promise was given that the representations of the deputation should have the careful attention of the Parks Committee.

The first extension of the City took place in 1885, and since that year the Corporation has acquired about 88 acres of land—a large part of it in the added districts—which is devoted to the public for purposes of recreation. Some of this land has been acquired by purchase; other portions became the property of the City on its taking over the assets and liabilities of the Local Board districts in which they were situated.

The first important acquisition was the Birch Fields Recreation Ground, Rusholme. During the progress of the negotiations for incorporation between the City Council and Rusholme Local Board, an opportunity presented itself to the latter body of obtaining a part of Birch Fields on very favourable terms. Sir William Anson made the Board a liberal offer, and the trustees of the late Richard Cobden also expressed their willingness to assist. The City Council looked with favour upon the proposed arrangement. At length the Local Board resolved that, subject to the approval of the Parks Committee of the City Council, the offers made to them should be accepted. The proposal of Sir William Anson was “to make the district a present of five acres of land, and to sell any reasonable quantity in addition which the Board might require at £400 per acre.” Cobden’s Trustees were willing to make the district a gift of 39,000 square yards belonging to them, which was subject to a chief rent of £162 6s. 9d., payable to the Trustees of the late Mr. Worsley. The land proposed to be taken was about 21 acres, with an entrance from Dickenson Road, opposite Anson Road, and another entrance from Brighton Grove.

The arrangement then made, subject to some modifications arising out of an agreement with the Manchester and Salford Recreation Grounds Committee, was ultimately carried out. The area devoted to the public was, moreover, extended by a purchase on the part of the Corporation of 10 additional acres, bringing the total up to 32½ acres, and in 1886 Birch Fields Recreation Ground was thrown open without any ceremony. The ground had not then undergone any alteration. As an “open space,” even in its natural state, it was well adapted, and was largely made use of, for cricket, football, and other outdoor sports. Plans were, however, prepared by the City Surveyor (Mr. Allison) for its improvement. In a year or two it became vastly altered for the better. The ground was thoroughly drained and

railed round; a pathway, seven yards wide, was made down the centre; two entrance lodges were built; and shelters and band stands were constructed. Spaces were set apart for a bowling green and for gymnasia; and now it possesses, in addition, lawn tennis and quoiting grounds, and a level open space of about 16 acres for cricket and football. The polluted stream running through the ground was dealt with by making a brick conduit along its entire length to prevent the accumulation of solid matter, and to avoid damage to the banks by floods. Trees and shrubs were planted, and portions of the borders laid out for flowers, and the net result of these works has been to make Birch Fields Park and Recreation Ground one of the pleasantest resorts on the south side of Manchester during summer time. The cost of the land, with the legal charges added, amounted to £8,458; the laying out up to March, 1893, cost £14,976 (with a further estimated cost for completion of £846), making the total cost, past and prospective, £24,280.

The formal opening of Birch Fields took place on the 20th October, 1888, on the occasion of a visit to Manchester of His Royal Highness Prince Albert Victor. The Prince attended, in the first place, a meeting of the Corporation, at which an address of welcome was presented to him in presence of a representative body of the citizens. The address mentioned, as a matter of especial satisfaction, that the objects of His Royal Highness's visit were connected with "the aims of ministering to the health and recreation of the people, the medical treatment of accidents and disease, and the moral and physical improvement of youths of the working class, upon whom the future of this country so largely depends." The Prince lunched with the Mayor (Alderman Sir John J. Harwood), the members of the Corporation, and a number of invited guests, and subsequently took his place in a procession which had before it a circuit of some eight or nine miles, with three stoppages for the discharge of public functions—namely, the opening of Birch Fields, the laying of a memorial stone of the new wing of Ancoats Hospital, and the inauguration of the Hugh Oldham Lads' Club in Livesey Street. The procession was accompanied by the Band of the 9th Lancers, and a troop of that fine regiment formed a guard of honour to His Royal Highness, who was everywhere most cordially greeted.

At the entrance to the new Recreation Ground a large crowd of spectators had assembled, who received the Prince with enthusiastic cheers. In front of the gates he was presented with a gold key by Councillor Stephen Chesters Thompson, the Chairman of the Parks Committee of the Corporation. Mr. Thompson, in making the presentation, addressed a few words to His Royal Highness, informing him that the grounds were intended for the healthy outdoor recreation and enjoyment of young and old of every class in this great industrial community. The Prince accepted the key, and shook hands with the members of the Parks Committee, who were presented to him by the Mayor. He then unlocked the gates, and passing underneath a crimson archway ascended a temporary platform, from which he declared the ground open. The singing of the National Anthem concluded the ceremony. Ancoats Hospital and the Lads' Club were subsequently visited. His Royal Highness left Manchester in the evening for Knutsford, on a visit to Lord Egerton of Tatton.

Cheetham Park (5 acres 1 rood 36 perches in superficial area) was opened to the public in the month of October, 1885. The event was attended by a public ceremony, and the Mayor (Alderman Sir John J. Harwood) was presented with a gold key, with which he unlocked the gate of the principal entrance in Elizabeth Street. What was formerly a wilderness of clay-pits and rough ground has been converted into a charming oasis in the midst of a populous district. The work has indeed been somewhat costly for so small an area. The land purchased from Lord Derby was six acres, and of this small space it was necessary to reserve a portion for roads; this left the land to be enclosed, as above stated, nearly five and a half acres. The purchase money paid to Lord Derby was £9,000, and the cost of laying out, &c., was £8,685—in all, £17,685. The cost of this small recreation ground seems high when compared with that of Birch Fields, but allowance must be made for the greater value of land in Cheetham, and for the different circumstances under which the two areas were acquired. As it stands, there is probably no open space more thoroughly appreciated by the people living in its neighbourhood. In summer time—particularly on band nights—it is often inconveniently crowded. It is provided with gymnasias, a bowling green, and ground for tennis and other games.

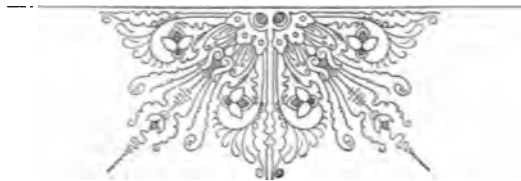
Gorton Park, the main entrance to which is from Hyde Road, opposite Belle Vue Gardens, was formally opened on the 9th June, 1893. It has an area of sixteen acres, consisting for the most part of level sward, excellent for purposes of recreation. At the Brunswick Street end, gymnasia have been fitted up; in the centre of the ground is a band stand, with seats for the public; and the outer boundaries have been planted with trees and shrubs. The opening of the park was attended with some little ceremony. The Mayor (Alderman Marshall) was asked by the Parks Committee to take the principal part in the function, and a gold key was presented to him. There was a procession of the Sunday Schools in the district. On behalf of the ratepayers, an address, handsomely illuminated, was presented to the Mayor, expressive of sincere pleasure at the completion of a work which was looked upon by the residents of Gorton with great satisfaction. "We recognise," the address said, "that this district has been the first of the newly-amalgamated townships in which a park has been placed, and we gladly acknowledge through you our indebtedness to the Parks Committee, not only for the prompt completion of the work, but also for the admirable and handsome manner in which it has been carried out, and especially in view of the provision which has been made for the recreation of the children. We also desire gratefully to acknowledge the beneficial work of the Council in our district, since the amalgamation, in regard to the great improvement in our streets, the better lighting of the district, the greater efficiency in the police supervision, and in particular the providing of a public free library." The cost of the land, it may be added, was (including legal charges) £20,820; and the cost of laying out, erecting band stand, gymnasia, &c., will reach £6,210.

A small park or "open space" has been provided for Crumpsall since the amalgamation of that township with the City. It is 4 acres and 23 perches in extent, and adjoins land bought by the late Crumpsall Local Board for the purposes of a cemetery in Oak Road. A sum of £3,900. was paid for the land. The cost of laying out both this plot and the 8 acres intended for a cemetery, now to be used as an open space, is estimated at £8,067. In Lower

Crumpsall there is a recreation ground nearly an acre and a half in area, which was provided by the Local Board, and transferred by them to the Corporation on amalgamation.

In addition to the above, recreation grounds and open spaces have been provided in various parts of the City within the last few years. In Prussia Street, Oldham Road, there is an open space 1 acre 1 rood 29 perches in extent, of which a portion (4,564 square yards) has been set apart as a recreation ground; in Mount Street, Ancoats, an open space of 2 acres 4 perches, of which 4,624 yards are devoted to recreation; the old Willert Street (Rochdale Road) Police Parade Ground, 1 acre 1 rood 23 perches, is similarly utilised; in Bradford a recreation ground, 3 acres 1 rood 11 perches in extent, has been acquired by the Corporation since the township was amalgamated with Manchester, at a cost of £8,791 (including the expense of laying out); in Harpurhey a piece of ground, 3 acres 10 perches, has been purchased by the Corporation since the amalgamation of that township with the City and laid out as a recreation ground, the cost to the ratepayers having been £9,526; in Openshaw a small park of about 7 acres was acquired by the Corporation when the township became amalgamated with Manchester, at a cost for land, &c., of £8,689; a recreation ground at Newton Heath, 2 acres 2 roods 11 perches in extent, was transferred by the Local Board of that township; in Clayton the Corporation have purchased $8\frac{1}{2}$ acres of land (including Clayton Hall), at a cost for land and legal charges of £3,764; in Gibbon Street, within the old City limits, the Corporation have laid out 2 acres 2 roods 22 perches of land, purchased on chief, for recreative purposes; and there are also small areas in Queen Street, Hulme, and Butler Street, Oldham Road, which the Corporation have suitably fitted up with means of recreation for adults and young people. St. Michael's Flagg, in Angel Meadow, covering a space of 1 acre 2 roods 22 perches, and surrounded by a dense working-class population, has been laid out, fenced, and planted with shrubs as a recreation ground, at a cost to the Corporation of £2,668. The place presents a vast improvement as compared with its former condition, where it was not unfrequently the resort of disorderly persons, and a source of much trouble to the police.

One of the most desirable "open spaces" which the Corporation has recently negotiated for is the well-known Boggart Hole Clough, on Blackley Glen, which, with the rest of the Booth Hall Estate, is at present in the market. The City Council at its meeting in October, 1893, resolved, on the recommendation of the Parks Committee, that an offer of £10,000. should be made for part of the Booth Hall Estate (including Boggart Hole Clough), containing 145 acres. It is proposed to devote 82 acres to the purposes of a cemetery.





Public Baths and Washhouses.



THE development of Baths and Washhouses for the public, as a department in municipal work in Manchester, has taken place entirely within the last sixteen years. It was in July, 1877, that the Council resolved to adopt the provisions of the Public Baths and Washhouses Act (9th and 10th Vic.), and the amending Act of the subsequent session. The Committee had before this considered the question of baths accommodation, and the needs particularly of the densely-populated district of Ancoats. They recommended, as a part of their scheme, first of all the acquisition by purchase of the old Leaf Street and Mayfield Baths belonging to the Manchester Baths and Lavatories Company Limited, and this was agreed to by the Council, the purchase of the two properties being effected for £19,000, subject to existing chief rents. As to Ancoats, they advised the erection of baths and washhouses upon a site in New Islington, and, along with them—and as a part of the same general scheme—of a building which would be available for public meetings and entertainments. The scheme was unanimously approved, and a commencement was made early in 1878 with the erection of the New Islington Baths and Public Hall, which have since proved of inestimable value to the district. The estimated cost of the entire buildings, together with machinery, was £22,000. The Committee were desirous of securing a plain, substantial, and useful building at a reasonable cost. The experience of other towns convinced them that any pecuniary loss which might arise would be more than compensated for by the increased comforts of the people, and by the assistance which would be rendered to the various departments of the Corporation in their efforts to improve the sanitary condition of the City. By extensions, which were subsequently found desirable, the total cost of the Baths

and Public Hall scheme amounted to £41,400, inclusive of the land (2,210 square yards), the purchase money for which was £7,299. Concurrently with the carrying out of the New Islington scheme, the Mayfield and Leaf Street Baths were reconstructed and improved in such a way as to greatly enlarge the public accommodation. The total cost of the Leaf Street establishment was £25,251, and of Mayfield £19,925.

Since the opening of the New Islington Baths, the Committee have considered the wants of other districts of the City. In Osborne Street, Rochdale Road, baths have been erected at a total cost of £28,532. The Newton Heath Baths, the Whitworth Baths (Openshaw), and the Gorton Baths are the property of, and managed by, the Baths Committee of the Corporation, and are each and all in their respective neighbourhoods very largely patronised and appreciated by those whom they were intended to benefit. The Committee have also provided new baths in Cheetham Hill Road, for the accommodation of the large population in Cheetham and Crumpsall. Connected with them is a public room, convenient for meetings and entertainments.

A few years ago a demand arose for an open-air bath in Philips Park, and the Parks Committee, convinced that such a scheme was desirable, proceeded to carry it out, with the sanction of the Council. The bath was completed and opened in June, 1891, and it became immediately very popular.

In 1890 the idea occurred to a number of gentlemen that some of the large swimming baths in different parts of the City might be fitted up as gymnasia for use during the winter months. The City Council sanctioned a moderate expenditure for this purpose, and at New Islington and Leaf Street gymnasia were fitted up. They were opened for the first time in January, 1891, by the Mayor (Alderman Mark); and at a meeting of the Baths Committee in April of that year it was reported that during the 10 weeks which had elapsed (from January 16th to March 28th), monthly tickets had been issued to the number of 265, and single tickets to the number of 14,478; that the total number of admissions had been 25,000, and the total receipts £36. 6s. 2d. The gymnasia were managed by the attendants at the baths without extra cost to the ~~rate~~ payers beyond a sum of £5 paid to an instructor, who was to manage the gymnasia in turn.



The Extension of the Gas Works.



THE history of the Manchester Gas Works during the last quarter of a century has been one of constant expansion, consequent on the growth of population and the increasing demand for gas, both for domestic and manufacturing uses. The manufacture of gas in Manchester has always been under the control of the local authority. Founded in pre-Corporation times by the old Commissioners of Police to supply a comparatively limited area, the original works, situated in Water Street, St. George's Road (now Rochdale Road), Holt Town, and Hulme, were transferred to the Corporation on the 28th June, 1843. Until that date the Commissioners had charge of the lighting of the town under an Act of Parliament passed in 1824. This was the first Act obtained by any local authority in England for the manufacture and supply of gas; and ever since, despite much opposition, continued agitation, and possibly a few mistakes, the enterprise has been a continued and brilliant success, adding much to the convenience and comfort of the inhabitants, and contributing largely to the public funds by the profits made in reduction of rates. Thus it appears that Manchester was the pioneer, among English municipalities, in this matter of gas lighting. It may be mentioned that on one occasion—of course, before the town received its Charter—there was a danger of the works being sold by public auction, but the ley-payers at that time were far-sighted enough to negative the proposal. When the Police Commissioners

were promoting their Bill an agitation was got up on behalf of a private company, who petitioned Parliament against the scheme. It was shown, however, that large numbers of signatures to the petition had been obtained by fraudulent means, and the opposition consequently collapsed.

Of the several stations transferred to them the Corporation have since abandoned three, namely, the Water Street Station, which was abandoned in 1856, together with No. 3 Station, and Holt Town, which was vacated in the following year. The policy of the Gas Committee for many years was to develop and enlarge the important works in Rochdale Road and Gaythorn.

The value of the works at the date of the transfer, and their capacity, are unknown, as no balance sheet of that date seems to be in existence. The mortgage debt, however, in 1843 was £83,750. The balance sheet, published in 1852, sets forth for the first time the nature of the assets and liabilities of the gas undertaking.

The assets were valued at	£360,710
And the liabilities are set forth at	126,411
Showing an excess of assets over liabilities of	<u>£234,299</u>

In the balance sheet for 1857 it is noted that Nos. 3 and 4 (Holt Town) Stations have been abandoned, and a re-valuation of the works then made shows the following result:—

Assets valued at	£396,589
Liabilities	337,982
Excess of assets	<u>£58,607</u>

From the date of the last-named valuation (1857) to 31st March, 1893, there has been charged to capital account in respect of the gas works no less a sum than £1,942,865. Over the same period the revenue account has been debited with the following sums, namely:—

For depreciation	£752,807
For sinking fund	801,362
Total	<u>£1,554,169</u>

The members of the Corporation made visits of inspection to the gas works in 1877, and again in March, 1893. Statistics furnished by the Gas Committee on the occasion of each visit indicate the progress made. The following figures show the make of gas each five years since 1865:—

YEARLY PRODUCTION OF GAS.									
			Make				Increase		Increase
			Millions				Millions		per Cent.
									for 5 years
1865	...	...	1,070	...	...	...	—	...	—
1870	...	...	1,451	...	...	...	381	...	35·6
1875	...	...	1,878	...	...	...	427	...	29·4
1880	...	...	2,324	...	...	...	446	...	23·7
1885	...	...	2,739	...	...	...	415	...	17·8
1890	...	...	2,974	...	...	...	235	...	8·5

The actual make of gas in 1892-3 was 3,636,680,000 cubic feet, being an increase of 235,849,000 cubic feet or 6·93 per cent. over the preceding year. This large increase arose partly from the normal increase in the number of consumers, partly from the better public lighting of the main thoroughfares and streets of the City, and partly from the fact that during the winter of 1892-3 the full demand for gas had been adequately met for the first time for several years.

The productive capacity of the works has on more than one occasion been put to a severe test. During the month of December, 1890, the consumption reached the high figure of 473,140,000 cubic feet, being an increase of nearly 50 per cent. on the December of 1889—the memorable month of the strike—and an increase of 15·31 per cent. on the consumption during December, 1888. On the 24th December, 1891, when a dense fog enveloped the City, the total stock of gas at the works at four p.m. was only 2,560,000 feet, as compared with 6,400,000 at the same hour on the previous day. Such a state of things naturally gave the Gas Committee some anxiety. They were, however, able to tide over the difficulty. On the 21st December (the shortest day of the year) the consumption reached the heavy total of 21,086,000 cubic feet, the nearest to this on any single day being 20,857,000 on December 24th of the preceding year. The average consumption on a winter's day, at that season,

was 16,000,000 to 17,000,000 cubic feet. In consequence of the heavy demand it was deemed necessary to limit the pressure to some extent.

It is satisfactory to know that such difficulties are not likely to occur again. The enlargements made in the productive and storage capacity at Bradford Road and Gaythorn—and upon which the Gas Committee are still engaged—will place the City beyond all fear of a gas famine. The present manufacturing capacity of the works is 21,250,000 cubic feet per 24 hours, and the largest consumption of gas in one day (December 8th, 1892) has been 22,433,000 cubic feet; hence the necessity for increased storage capacity to bring it up to a balance with the make and consumption.

This necessity was forced upon the attention of the Gas Committee after the last extension of the City, in 1891, and it was determined to ask the Council to sanction an application for a Provisional Order of the Local Government Board for borrowing powers to the extent of £500,000. An inquiry was held in March, 1893, when the following facts were laid before the Commissioners by Councillor Joseph Brooks, the Chairman of the Gas Committee:—"The recent amalgamation with the City," Mr. Brooks said, "of the Townships of Crumpsall, Blackley, Moston, Newton Heath, Clayton, Openshaw, Kirkmanshulme, and a portion of Gorton had added 6,861 acres, which now made a total of 12,788 acres of the City area. The amalgamation also added 105,500 to the number of the population, making a total population within the City of 484,300. At the time of the incorporation there were 11,228 gas consumers in these townships, which had since been increased to 12,051, being an increase of 823, or 7·33 per cent. in two years. The total number of gas consumers in the City on the 31st March, 1893, was 65,958, and beyond the City 15,475, making a total of 81,433. Consequent upon the incorporation of the above townships with the City, the price of gas in those townships was at once reduced from 3s. to 2s. 6d. per 1,000 cubic feet, and that had resulted in a large increase in the consumption of gas. The quantity of gas consumed in these townships during the year immediately preceding amalgamation was:— In 1890, 296,478,000 cubic feet; in the year after amalgamation, 1891, 341,980,100 cubic feet; and in 1892, 366,190,600 cubic feet; a

total increase of 69,712,600 cubic feet in two years, or 23·5 per cent. over the year 1890. There was also a large increase in the consumption of gas arising from the number of houses and business premises which were annually built, especially in districts more or less remote from the centre of the City, which had caused an increase in the consumption of gas in ten years of 929,654,000 cubic feet, being 37·6 per cent., or an average increase of 3·7 per cent. per annum. During the year ended 31st March, 1892, the increase in consumption of gas was 3·12 per cent. on the previous year, and from the 31st March last to the present time the increase had been 8 per cent. During the past two or three winter months the manufacturing and storage capacity of the works were inadequate to supply the quantity of gas required, or the increase in consumption would have been still greater. In order to meet the growing demand for gas it was absolutely necessary to take immediate steps for increasing the manufacturing and storage capacity of the works, to increase the size of the chief gas mains in the vicinity of the works, and also to increase the size of and to extend the mains to and in the more distant areas of consumption. From the year 1882 to 1892, inclusive, the sum of £462,313. had been spent on capital account for the extension of works and mains, being at the rate of upwards of £46,000. a year, about £15,000. per annum of which had been for extension of mains. It was expected that the rate of consumption would be still further accelerated by the use of gas not only for illumination, but for heating, cooking, and motive power. The manner in which it was proposed to expend the sum of £500,000. was as follows:—Bradford Road Works, £135,000; Gaythorn Works, £35,000; Rochdale Road Works, £50,000; Droylsden Works, £17,000; Street Mains—£20,000. a year for ten years, £200,000; meters and stoves—£5,000. a year for ten years, £50,000; miscellaneous works, £15,000; total, £502,000. In reference to the item 'miscellaneous works,' it should be stated that the Gas Committee were under the necessity of making experiments and trying new machinery. They had now in hand an oil enriching process to supersede the use of expensive cannels. They had also under consideration a water oil gas apparatus, and must be in a position to adopt any new process in relation to illumination and purification, &c. The works were all maintained in the highest state of efficiency out of revenue."

The Order was granted by the Local Government Board, and sanctioned by Parliament, and under the powers given them the Gas Committee are proceeding with the erection of a new holder and tank at the Bradford Road Works to contain about 7,000,000 cubic feet of gas. This holder, it is expected, will be completed in time to be brought into use in the winter of 1895. A new holder has also been erected at Gaythorn, to contain about 1,500,000 cubic feet, which will be at work in the winter of 1893-4. There is also a new holder at Droylsden, to contain 525,000 cubic feet, which will bring the total gas storage capacity of the works to over 25,500,000 cubic feet—probably an ample supply for several years to come.

The sum of £500,000. proposed to be borrowed on Capital Account will, according to the scheme of the Committee, be expended during the next eight or ten years, as follows:—

		£	£
BRADFORD ROAD WORKS:			
New Holder and Tank	65,000		
New Retort House	35,000		
Stoking Machinery and Fittings	20,000		
River Wall	5,000		
Coal Railway Siding	5,000		
Offices and Stables	5,000		
			135,000
GAYTHORN WORKS:			
New Holder and Tank	30,000		
Land	5,000		
			35,000
ROCHDALE ROAD WORKS:			
Reconstructing Retort Houses, including Fittings and Machinery			50,000
DROYLSDEN WORKS:			
New Holder and Tank	15,000		
Land and Building	2,000		
			17,000
STREET MAINS:			
£20,000. a year for 10 years			200,000
METERS AND STOVES:			
£5,000. a year for 10 years			50,000
MISCELLANEOUS WORKS			15,000
Total			<u>£502,000</u>

The Council on the 4th October, 1893, sanctioned an application to the Local Government Board for power to borrow £250,000. under Article IX. of the Local Government Board's Provisional Orders

Confirmation (No 12) Act, 1893, which amount is required for the years 1893-4 and 5. It is proposed to expend this money on the following works:—

BRADFORD ROAD WORKS.

Gasholder tank, 254ft. diameter, and 50ft. 6in. deep. Three-lift gasholder, to hold 7,000,000 cubic feet. Contract schedule list of prices:—

Tank	£28,897
Holder	33,958
Inlet and outlet pipes, probable additions, stoking machinery, manager's house, purifying house, and other works and machinery	51,546
	<u>£114,401</u>

[**MEM.**—The foundation stone of these works was laid on the 10th October, 1877, by Alderman Hopkinson, the then chairman of the Station Sub-Committee. Gas making was commenced in the first retort-house on the 16th December, 1884, and in the second retort-house on the 11th November, 1892.]

GAYTHORN WORKS.

Gasholder tank, 150ft. diameter, and 30ft. deep. Gasholder, three-lift, to hold 1,500,000 cubic feet. Contract schedule list of prices:—

Tank	£9,253
Holder	11,144
Pumping, probable additions (tank and holder), cost of inlet and outlet pipes	4,907
	<u>£25,304</u>

ROCHDALE ROAD WORKS.

Reconstructing B retort house, including fittings and machinery	£25,000
New purifiers, boilers, &c.	9,720
	<u>£34,720</u>

DROYLSDEN WORKS.

Gasholder tank, 100ft. diameter, and 24ft. deep. Gasholder to hold 500,000 cubic feet. Contract schedule list of prices:—

Tank	£2,894
Holder	3,970
Sundry plant, land for holder and buildings, &c.	7,668
	<u>£14,532</u>
Street mains, service pipes, &c., 1893-4-5... ..	£30,000
Meters, ordinary and prepayment, 1893-4-5 ...	15,000
Stoves department (including cost of land and building, stoves, and extras)	11,700
Miscellaneous works	4,343

With regard to the Bradford Road extension, it may be stated that the new gasholder will be the largest in the provinces, and probably the largest in England, excepting the huge structure recently completed in London, which has a holding capacity of not less than twelve million cubic feet. There is abundant space available for such extensions as may be considered necessary now, and for some time to come, in the property at Bradford Road. So much cannot be said for the Rochdale Road Station, which is hemmed in on all sides by cottage property. Here the ground available is what it was in 1877—9 acres and 339 square yards; but that the utmost possible use has been made of the space will be seen when it is stated that in 1877 the carbonising power was only six millions cubic feet, whereas now it is 8,500,000. There has been a proportionate increase also in the storage capacity.

At the 31st March, 1893, the value of the property and assets of the Gas Committee as shown by the balance sheets was £1,735,814, and consisted of the following items:—

	£
Land valued at	229,918
Buildings valued at	325,434
Apparatus valued at	391,049
Meters and Stoves valued at	90,973
Mains and Service Pipes valued at	441,517
Stocks valued at	98,137
Accounts owing to Committee	154,169
Cash in hand	4,617
	<u>£1,785,814</u>

The liabilities at the same date amounted to £837,908, and are set forth as follows:—

	£
Mortgage Debt	669,682
Deposits, &c.	47,913
Accounts owing by Committee	44,668
Owing to Bankers	75,645
	<u>£837,908</u>
Excess of Assets (1893)	<u>£297,906</u>

The mortgage debt at various dates has been as follows:—

	£		£
1843	83,750	1873	444,890
1853	123,000	1883	727,809
1863	344,173	1893	669,682

With regard to the general capacity of the works, no statistics appear to have been published until 1877. The following table shows the total producing power in cubic feet per 24 hours, and the storage capacity in that year as compared with subsequent years:—

Year.	Total producing power per 24 hours. Cubic feet.	Storage capacity. Cubic feet.
March, 1877	10,928,000	7,722,130
March, 1887	18,168,000	14,292,000
March, 1893	21,250,000	16,500,000
October, 1893	21,650,000	18,462,000*

* This includes the new holder at Gaythorn and the one at Droylsden, which will shortly be brought into use.

Without going into detail with regard to each station, it may be stated that the four stations together cover an area of 75 acres of land. There are ten retort houses, containing 1,451 retorts (2,902 mouthpieces), turning out the 22,000,000 cubic feet of gas per day, to produce which some 380,000 tons of coal and cannel annually are required. In addition to this, and the requisite washing, scrubbing, and purifying plant, there was in use in the winter of 1893-4 gasholders of at least an aggregate capacity, as shown above, of 18,462,000 cubic feet. The storage will soon after be increased, as already stated, by the new holder at Bradford Road, to the extent of 7,000,000 cubic feet, bringing up the storage capacity at the different stations to the round figure of 25,500,000 cubic feet. The maximum number of men employed at the works is 1,746.

The requirements for the distribution of gas are indicated by the following facts:—The pipe store yard at Poland Street contains 3,763 square yards. Gas is distributed to a distance of ten miles from the Manchester Town Hall. There are 705 miles of street mains and 270 miles of service pipes laid in the district. The streets and thoroughfares are illuminated by 15,059 public lamps, 2,181 of them being of the large and improved type. The maximum number of men employed in the street mains and lighting departments is 420. The offices occupied in the Town Hall cover a space of 1,755 square yards. There are 75 bookkeepers and clerks, 26 collectors, and 78 inspectors. The individual or separate consumers of gas number over 80,000. Of these, more than one-half, or about 52,000, use less than 20,000 cubic feet per annum; 80,000 (including the above 52,000) burn less than one million cubic feet per annum; 180 consumers burn from 1,000,000 to 10,000,000; and ten burn upwards of 10,000,000 per annum. All the consumers are visited at least twice in each quarter by the inspectors to examine and read the meters: thus, not less than 640,000 visits are made in the course of a year. Eighty thousand bills are made out in each quarter, or 320,000 in the year. The 26 collectors have each an average of over 3,000 accounts to collect, and will have on the average to make two calls per quarter, or 640,000 in the year. The bad debts, from all causes, amount to 2s. 6½d. per cent. on the total revenue. The cost of collection is 26s. 1d. per cent. on the total revenue. Ten years ago the cost was 31s. 10d. per cent., although the price of gas during that time has been reduced from 3s. to 2s. 6d.

There are in the district about 720 gas engines and about 5,300 cookers and fires in use, which, in the aggregate, consume about 150 million cubic feet of gas per annum. The number of prepayment meters in use is about 250, consuming in the aggregate 15 million cubic feet of gas per annum. The total number of transactions for sale of coke during the year ending March, 1893, was 518,191.

The progressive increase of the consumption of gas in Manchester and throughout the district supplied by the Corporation is well illustrated by the following statement:—

STATEMENT SHOWING QUANTITIES OF COAL AND CANNEL
CARBONIZED ANNUALLY FROM 1860 TO 1893.

Year	Tons	Year	Tons
1860	76,039	1877	209,898
1861	81,243	1878	216,655
1862	80,656	1879	236,551
1863	82,225	1880	243,420
1864	93,592	1881	251,737
1865	103,561	1882	254,894
1866	122,103	1883	258,896
1867	127,328	1884 (9 months) ...	228,582
1868	123,655	1885 (To March 31st)	280,594
1869	136,727	1886 do.	285,141
1870	147,679	1887 do.	292,335
1871	158,574	1888 do.	293,348
1872	178,413	1889 do.	303,617
1873	185,198	1890 do.	302,530
1874	184,996	1891 do.	346,915
1875	194,488	1892 do.	351,191
1876	205,510	1893 do.	365,235*

* In addition to this, 400,000 gallons of carburine for gas enriching purposes, as a substitute for the more expensive cannels, were used.

SUMMARY.

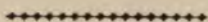
Showing value of property under the control of the Gas Department, capacity of the works, and other particulars in the years 1877 and 1893:—

	1877	1893
	£	£
Total Book Value of Property	778,660	1,478,891
Gas-producing Power per 24 hours	Cubic feet 10,928,000	Cubic feet 21,250,000
Largest Daily Consumption of Gas	11,381,000	22,483,000
Annual Carbonisation, Cannel and Coal	Tons 210,000	Tons 365,235
Annual make of Gas	Cubic feet 2,100,000,000	Cubic feet 3,636,680,000
Storage Capacity	7,700,000	18,462,000
Public Lamps in City	8,450	12,547
Public Lamps outside City	3,400	2,512
Number of Stoves in use and on hire... ..	Nil	5,802
Number of Gas Engines	Nil	716
Number of Consumers in City	50,500	65,958
Number of Consumers beyond City	21,300	15,475
Price of Gas within City	Six Months 3/6 3/4	2/6
Revenue—Gas Rental	828,600	445,715
Residuals	58,000	81,906
Meter and Stove Rents... ..	5,170	13,591
Total Wages paid	68,000	132,200
Cost of Administration	16,200	23,370
Ditto per ton Carbonised	d. 18·5	d. 15·8
Net Profit	57,300	64,793
Paid to City Fund... ..	42,140	46,046
Ditto from 1862 to 1892... ..	£1,103,346	
Length of Main and Service Pipes laid	Miles 756	Miles 975
Value of Street Mains	263,000	441,517





Extension of Free Libraries.



MANCHESTER was, as is well known, the first town in the United Kingdom to adopt Ewart's Public Libraries Act of 1850. The original library was opened in 1852 with a collection of 18,000 volumes, divided between the Reference and the Lending Departments. Five years later two branch libraries, situate in Hulme and Ancoats, were opened. These were followed in 1860 by the opening of the Rochdale Road Branch, in 1866 by that in Chorlton-upon-Medlock, and in 1872 by the Cheetham Branch. The Hulme, Ancoats, and Cheetham Branches were at first of extremely moderate dimensions, being opened in shops, which were rented and adapted for library purposes. These premises were soon found to be too small for the work that had to be accomplished, and the present fine and spacious buildings were subsequently erected. The Rochdale Road Branch also was twice enlarged, the accommodation for books and readers being now more than four times greater than it was in 1860.

The original building in Campfield having become unsafe, it was resolved in 1877 to remove the books to the Old Town Hall, in King Street, which was opened as the Reference Library in February, 1878. The result of the change to so central a position was an immediate and enormous augmentation of the usefulness of the library, the number of books consulted in the first full year being 173,137, or nearly three times the number issued during any immediately preceding year at Campfield. So continuous and great has been the use

of this library year by year since its opening in the Old Town Hall, that frequent extensions of the accommodation for readers as well as for books have been necessitated. In 1882 and again in 1887 such alterations were made as to double the original space available for readers, and now the Committee are once more confronted with the same problem, and have under their consideration plans by which the land at the back of the building, which has been vacant since they took possession, may be utilised for enlargement. The most recent improvement has been the introduction of the electric light, which is now in use throughout the library.

The books constituting the Campfield Lending Library remained stored at the Old Town Hall until 1882, when a new building was completed. This was erected, in conjunction with the Markets Committee, on a site fronting Deansgate and Liverpool Road.

In 1878, two new departures were made with the purpose of extending more widely the advantages of the libraries. The first was the opening of the libraries on Sunday afternoon and evening; the other was the provision of rooms specially for the use of boys. The latter was first tried at the Ancoats Branch, and similar rooms have gradually been attached to all the branch libraries.

About the year 1885 the results of a movement which had for some time been in progress for the enlargement of the City boundaries, by the inclusion of a number of contiguous townships, began to be felt, and shortly afterwards several townships were added to the City. The districts of Bradford and Harpurhey desired to have the advantages of the free library system extended to them; but the Committee, owing to the legal restriction of their income, found it impossible fully to comply with their wishes. It was therefore decided to place reading rooms, without lending libraries, in these new districts. For this purpose they obtained possession of the Bradford Town Hall, and converted it into a reading room. At the same time a new building was erected on the borders of Queen's Park as a reading room for the Harpurhey district. Both these rooms were opened almost simultaneously—one on February 8th and the other on February 9th, 1887; and on May 7th, 1888, another in Hyde Road was inaugurated. These reading rooms have been very successful; and as their original cost and that of maintenance is

comparatively small, the Committee consider it wise policy to extend the system, and an addition to them is now in course of erection in Chester Road, Hulme, whilst sites for others have been discussed by the Committee.

In 1891 the Committee addressed themselves to the duty of obtaining from Parliament an extension of their resources. They succeeded in obtaining powers to increase the rate to be levied from one penny to any sum not exceeding twopence in the pound. When it therefore became necessary to supply the wants of those townships which, by the process of further boundary extension, had been incorporated in the City, they were in a position to grapple with the task immediately.

They began with Newton Heath, and undertook the completion of the library which formed part of the handsome brick building under construction by the Local Board at the time of incorporation. This library was opened by the Mayor (Alderman Mark) on September 28th, 1891, with 4,828 volumes, a fair proportion of which were purchased out of the proceeds of a subscription of £240. raised by residents in the neighbourhood.

Whilst this work was engaging the attention of the Committee, they had the gratification of receiving from the Trustees of the Longsight Mechanics' Institution and of the Rusholme Public Hall, both situated in newly-added districts, offers to transfer their properties to the Corporation for the purpose of conversion into free libraries. Both offers were accepted, and the buildings were accordingly obtained to fit them for their new purposes. The Rusholme Branch was opened on April 30th, 1892, by Sir Henry E. Roscoe, M.P., and the Longsight Branch on July 23rd of the same year by Mr. Alexander Ireland.

Still another generous proposal was made to the Corporation about the same time. The Legatees of the late Sir Joseph Whitworth had projected a range of buildings to be erected at Openshaw, which should include a Public Hall, Recreation Rooms, and a Library and Reading Room. They offered to present to the Corporation land worth £2,200. for the site, and £6,000. in money towards the cost of erecting the contemplated building. Their gifts were gratefully accepted, and the work was at once proceeded with, and will, it is anticipated, be completed in the spring of the present year.

This does not exhaust the activities of the Committee in the direction of extension, for in the same year (1892) they purchased a plot of land in Gorton as a site for a branch library for that township. The building is now in progress, and will be completed almost simultaneously with the Openshaw Branch.

How the inhabitants of Manchester have appreciated the almost unexampled facilities for intellectual culture or enjoyment, which have been secured to them by the establishment of the libraries, may be gathered from the presentation of a few statistics. The following table shows the number of books they have read either in the Reference Library, in the Reading Rooms of the Branch Libraries, or in their own homes :—

YEAR	Annual Total	Daily Average	YEAR	Annual Total	Daily Average
1st 1852-3 ...	138,312	... 461	22nd 1873-4 ...	819,173	... 2,805
2nd 1853-4 ...	142,345	... 488	23rd 1874-5 ...	765,668	... 2,815
3rd 1854-5 ...	147,582	... 495	24th 1875-6 ...	751,342	... 2,513
4th 1855-6 ...	156,553	... 523	25th 1876-7 ...	681,906	... 2,684
5th 1856-7 ...	178,275	... 600	26th 1877-8 ...	735,915	... 2,746
6th 1857-8 ...	282,847	... 1,127	27th 1878-9 ...	985,079	... 3,281
7th 1858-9 ...	270,389	... 914	28th 1879-80 ...	966,468	... 2,777
8th 1859-60 ...	296,050	... 1,244	29th 1880-1 ...	971,337	... 2,908
9th 1860-1 ...	379,470	... 1,270	30th 1881-2 ...	1,065,853	... 3,269
10th 1861-2 ...	445,538	... 1,500	31st 1882-3 ...	1,191,588	... 3,338
11th 1862-3 ...	476,698	... 1,594	32nd 1883-4 ...	1,320,393	... 3,700
12th 1863-4 ...	398,390	... 1,661	33rd 1884-5 ...	1,381,149	... 3,847
13th 1864-5 ...	408,177	... 1,365	34th 1885-6 ...	1,461,740	... 4,150
14th 1865-6 ...	382,947	... 1,330	35th 1886-7 ...	1,462,028	... 4,107
15th 1866-7 ...	592,215	... 2,008	36th 1887-8 ...	1,606,874	... 4,464
16th 1867-8 ...	674,291	... 2,263	37th 1888-9 ...	1,649,741	... 4,700
17th 1868-9 ...	707,738	... 2,375	38th 1889-90 ...	1,564,808	... 4,432
18th 1869-70 ...	729,281	... 2,447	39th 1890-1 ...	1,509,124	... 4,263
19th 1870-1 ...	751,819	... 2,523	40th 1891-2 ...	1,654,568	... 5,303
20th 1871-2 ...	785,309	... 2,845	41st 1892-3 ...	1,712,114	... 5,021
21st 1872-3 ...	855,062	... 2,889	TOTAL ...	33,456,156	... —

The foregoing figures refer solely to the reading of books. Those which follow show the popularity of the newsrooms, which are supplied with a selection of newspapers and periodicals accessible to readers without formality of any kind. From countings which are

taken twice a year, one week in winter and one in summer, a calculation is made of the approximate total number of visits made to the newsrooms for the whole year. The following are the figures for 1892-3:—

VISITS TO READING ROOMS, 1892-3.

BRANCH LIBRARIES.									
Ancoats	...	...	...	...	...	...	...	...	203,553
Cheetham	...	...	...	...	...	...	...	...	522,345
Chorlton	...	...	...	...	...	...	...	...	456,578
Deansgate	...	...	...	...	...	...	...	...	622,468
Hulme	...	...	...	...	...	...	...	...	491,526
Longsight	...	...	...	...	...	...	...	...	166,217
Newton Heath	...	...	...	...	...	...	...	...	101,617
Rochdale Road	...	...	...	...	...	...	...	...	336,238
Rusholme	...	...	...	...	...	...	...	...	147,138
READING ROOMS.									
Bradford	...	...	...	...	...	...	...	...	95,832
Harpurhey	...	...	...	...	...	...	...	...	184,982
Hyde Road	...	...	...	...	...	...	...	...	231,680
TOTAL...									3,560,174

If this total of 3,560,174 be added to the visits paid to the libraries for other purposes, the number obtained is 5,073,825, which shows a daily average of 13,977.

In the following table the number of volumes on the shelves of the libraries at intervals of five years from their formation is shown:—

INCREASE IN THE NUMBER OF VOLUMES IN THE LIBRARIES SINCE THEIR FOUNDATION.

	Reference Library	Lending Libraries and Reading Rooms	* TOTAL
1st Year, 1852-3	15,744	7,195	22,939
5th " 1856-7	25,858	10,029	35,887
10th " 1861-2	31,604	28,743	60,347
15th " 1866-7	39,264	44,705	83,969
20th " 1871-2	46,614	72,462	119,076
25th " 1876-7	56,480	80,921	137,401
30th " 1881-2	70,320	90,449	160,769
35th " 1886-7	84,064	101,955	186,019
40th " 1891-2	97,739	127,919	225,658
41st " 1892-3	99,845	133,262	233,107

NAME, LOCALITY, AND DATE OF ESTABLISHMENT OF EACH
LIBRARY AND READING ROOM.

*Reference and Lending Library... ..}	Campfield	2nd Sep., 1852
Hulme	Stretford Road	23rd Nov., 1857
Ancoats	Every Street	7th Dec., 1857
Rochdale Road	Livesey Street	4th June, 1860
Chorlton and Ardwick	Rusholme Road	8th Oct., 1866
Cheetham	Cheetham Hill Road ...	29th Jan., 1872
Deansgate... ..	Deansgate	5th April, 1882
Bradford	Brook Street, Bradford	8th Feb., 1887
Harpurhey... ..	Queen's Park	9th Feb., 1887
Hyde Road	Hyde Road	7th May, 1888
Newton Heath	Oldham Road	28th Sep., 1891
Rusholme	Dickenson Road... ..	30th April, 1892
Longsight... ..	Stockport Road	23rd July, 1892
Openshaw	Ashton Old Road ...	In course of erection
Gorton	Clowes Street	" "
Chester Road	Chester Road, Hulme...	" "

* The Reference Library was removed from Campfield to the Old Town Hall, King Street, and opened on the 8th of February, 1878; the Lending Library was removed to Deansgate, and opened in the present building on 5th April, 1882; the present Hulme Library was opened in June, 1866; the Ancoats Library in September, 1867; and the Cheetham Library in February, 1878.

The dates of opening of the Boys' Rooms are as follows:—Ancoats, 8th January, 1878; Chorlton, November, 1878; Hulme, 6th September, 1880; Deansgate, 5th April, 1882; Cheetham, 19th December, 1883; Rochdale Road, 12th October, 1885. The rest of the Branches, except Harpurhey, were provided with Boys' Rooms at their establishment.





Encouragement of Thrift.



MANCHESTER, from the time of its incorporation, has been very fortunate in its staff of working officials. Sir Joseph Heron, the first Town Clerk, was pre-eminent among his compeers, and the rank and file of the service have always been animated with the desire to be thorough with their work. Municipal service differs much, however, from the ordinary commercial service. There is less scope and there is less opportunity of advancement. At the same time there are no vicissitudes imperilling the position—once in the line in youth, a man need not fear bad trade or discharge, provided he is steady and honest, and does his duty with a fair amount of diligence. The rise is by gradual promotion, and many of the present officials came into the service as boys.

The service in 1888 comprised 5,439 persons, whose remuneration amounted to £359,372 per annum; and in 1892, 6,837 persons, receiving £469,845 per annum.

Amongst this large number it may be presumed that some were prudent and thrifty, and others extravagant and careless. Cases were constantly brought before the Council of men dying, or being incapacitated, with no provision made for their families. Sometimes it happened they had meant well, but had lost their savings through bad investments. Legally, the Committees had no power to make the provision which every head of a family should make whilst in life and health. Their hearts being touched, they did, however, often

make illegal gifts and grants. This was unjust to the ratepayers, and to the thrifty officials who were doing their duty to their families. Then, too, the existing conditions retained officials in the service who could not efficiently perform their work. To discharge them meant that they would have to be kept out of the rates;— to keep them at full wages, when incompetent, demoralised their fellows.

This condition of things, coupled with the fact that many large companies were experimenting in the direction of securing provision in old age for their officials, induced the Corporation on the 4th July, 1888, to appoint a Committee “to enquire and to report as to the desirability of establishing a scheme of Compulsory Thrift, which shall be optional to the present employés, but obligatory to all who may hereafter enter the service of the Corporation.”

This Committee investigated the various Thrift or Superannuation Schemes that had been adopted both in England and abroad, and in August, 1889, issued their report, recommending an entirely new departure.

They felt that it was unfair to throw all savings into one common fund, and to average, in its disposition, the steady and healthy with the dissipated and sickly man. They also decided that there should be no forfeiture except for dishonesty, but that all desiring to leave the service of the Corporation should be at liberty to do so, and to withdraw the full amount of their savings with interest. This required that a separate account should be kept for each of their old officials who voluntarily joined the scheme, and for each official who might hereafter enter the service.

The scheme having passed the Council had, before going to a Parliamentary Committee, to be submitted to Lord Morley, Chairman of Committees in the House of Lords. Here objection was raised to its compulsory nature, and modifications were made which, as the Committee thought, robbed it of its most vital features. The alterations rendered it necessary to again submit the scheme to the Council, where it was further mutilated by confining the contributors to those in the receipt of £250. a year, or under. In the meantime the London County Council had followed the lead of Manchester, but instead of seeking direct powers from Parliament for compulsion,

they simply asked for enabling powers for the Council to frame a scheme, and use compulsion or otherwise as they might decide. The Committee felt that to proceed with their Bill in its altered shape was unwise. They therefore applied to Lord Morley for permission to adopt the same procedure as the London Council. His assent being obtained, the Bill passed through Parliament in 1891, and on the 3rd August, 1892, the Council approved a scheme without limit as to salary, except that it should only be compulsory as regards new officials in receipt of not less than 30s. per week.

The scheme may be shortly summarised as follows, viz.:—

All officials in receipt of not less than 30s. per week, taken into the exclusive service of the Corporation since the date of the passing of the Act (5th August, 1891), become liable to contribute $3\frac{1}{4}$ per cent. of their salaries or wages to the Thrift Fund. (By section 9 of the Act, the Corporation are required to add one-third of the amount contributed by the officials, or $1\frac{1}{4}$ per cent., making the total contribution to the fund 5 per cent.)

The whole of the present regular staff, whatever their remuneration, and all future officials in receipt of less than 30s. per week, may voluntarily place themselves under the same obligation to contribute, with the like privileges.

An account is to be kept in favour of each contributor, who, during the continuance of his service with the Corporation, has no power to withdraw, alienate, or charge the amount standing to his credit. The fund is to accumulate with compound interest at 4 per cent., and a contributor on attaining the age of 65 years, or becoming incapacitated for service, is entitled to receive the whole amount standing to his credit, including the contribution of the Corporation. In case of death, his representatives would in like manner be entitled to receive the whole amount.

A contributor resigning or leaving the service before attaining the age of 65, or before becoming incapacitated, is repaid his own contributions, with all interest accrued thereon. A fraudulent contributor forfeits all claim on the fund at the discretion of the Corporation.

In case of long illness, an advance may be made equal to one-fourth of the official's contribution and interest.

A Consultative Committee of five persons is elected annually by the contributors, to give their concurrence in certain matters, and to advise with the Corporation whenever so desired.

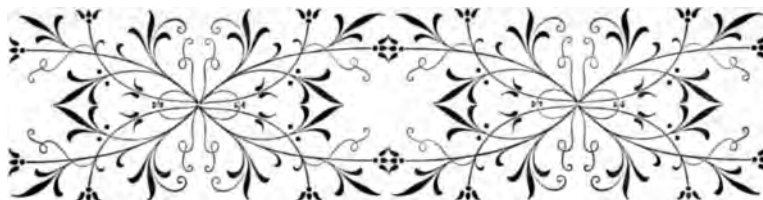
The scheme came into actual operation on the 1st October, 1892, and up to the end of the financial year, out of 4,514 officials eligible to become contributors, 1,406 were enrolled. Of these 1,406 contributors, only 77 were liable to contribute, having entered the service since August, 1891. The remaining 1,329 persons have voluntarily undertaken the obligation to contribute to the fund, and comprise office boys, sweepers, labourers, carters, masons, foremen, inspectors, clerks, and heads of departments.

The result up to 31st March, 1893, was as follows, viz. :—

Amount deducted from Salaries and Wages...	£2,277	19	9
Contribution of the Corporation under the scheme, being one-third of the officials' con- tributions (excluding fractions of a penny)		757	14 6
			<hr/>
Total in fund	£3,035	14	3

There is every probability that at the end of the financial year ending 31st March, 1894, the fund will be not far short of £10,000. Each month brings fresh contributors as the matter becomes better understood by the officials, and the result to them and to the Corporation will, in the course of time, be found to be mutually advantageous, and to justify the action of the Council in establishing this scheme for the encouragement of thrift.





Transfer of the Royal Institution to the Corporation.



THE transfer to the Corporation of the Royal Institution building in Mosley Street took place, under authority of an Act of Parliament, in 1883. The building has an interesting history. On the 1st October, 1823, a meeting of the inhabitants of Manchester was held in the Royal Exchange to consider the suggested establishment in the town of an institution "for the encouragement of the Fine Arts." The proposal was received with favour, and at the meeting and subsequently, a sum of £30,000. was raised, which was devoted to the founding of the Royal Institution. In 1825 the eminent architect, Sir Charles Barry, was retained to prepare designs for the building. Pending its completion, about 1830, the gallery was temporarily placed in Market Street.

It is not necessary, in this connection, to dwell on the work which for over half a century was carried on by the Council of the Royal Institution, the extent to which local art was encouraged by them, and the treasures with which from time to time they were able to enrich their galleries. These have been abundantly acknowledged. The spirit of the age, however, declared itself in favour of the municipal management of art. In November, 1880, the Governors of the Royal Institution opened negotiations for its transfer to the Corporation without any purchase money or pecuniary consideration,

but under conditions which would ensure that for twenty years an annual sum of £2,000. should be devoted by the Corporation "to the purchase of works or other objects of art, so that in time there should be formed a Permanent Art Gallery the property of the Corporation, in trust for the benefit of the City." This was a public-spirited act on the part of the Governors, for which they received the cordial thanks of the citizens. The arrangement was carried into effect by an Act of Parliament passed on the 10th of August, 1882. By this Act the land and buildings of the Royal Institution (subject to the ground rents affecting the same), and all the statues and paintings belonging to the Institution, became vested in the Corporation absolutely, with power to extend the site or adopt other sites, and to alter and extend the buildings as circumstances might require. It was provided that the Art Gallery Committee should consist of fourteen persons, whom the Corporation should appoint on the 9th of November in each year, together with seven other persons nominated by the Council of the Institution, the proceedings of the Committee to be subject to confirmation by the Council. Clause 11 enacted that "the said Art Gallery and all articles and objects therein shall be held upon trust by the Corporation, and shall be managed by the Council by or through such Committee as aforesaid, and shall at all times be kept in fit and proper order for the benefit of the citizens of Manchester." Discretion was, at the same time, given to the Corporation to sell or exchange works of art, and to "receive by way of gift or bequest any appropriate articles or objects which they shall deem desirable acquisitions"—all such articles and objects to belong to, and form part of, the said Art Gallery. The profits of any exhibition held under the Committee's auspices were to go to augment the resources of the Art Gallery, and the Committee were authorised to purchase, as they might see fit, any pictures exhibited, for the Permanent Collection.

It was anticipated that the provision of an Art Gallery vested in the Corporation would lead to valuable pictures being given for the public benefit. This expectation was not disappointed. Immediately upon the transfer taking place, Sir Joseph Whitworth presented five important works by Etty. Mr. William Agnew and the executors of his late brother and partner, Mr. Thomas Agnew, intimated their gift to the Council of Holman Hunt's great work,

"The Shadow of Death;" and from Mr. W. A. Turner there was received "The Golden Gate," by Val. Prinsep. Mr. F. Smallman has also generously made two valuable and important gifts—"The Silver Lining of the Cloud," by James Aumonier, presented in 1890, and "The Water of the Nile," by Frederick Goodall, R.A., 1893. These important gifts encourage the Committee to hope that the Permanent Gallery will, as time goes on, be enriched by many noble works, which will have an elevating and refining influence on the large number of persons who visit the Gallery. Amongst the donations also recently received is a valuable collection of water-colours by David Cox, Copley Fielding, De Wint, Prout, Varley, and other celebrated artists. For these the Committee were indebted to Mr. Roger R. Ross, of Victoria Park.

The formal inauguration of the Art Gallery under its new conditions took place on the 31st August, 1883, on which date the first Autumn Exhibition under municipal auspices was thrown open to the public. At the request of the Art Gallery Committee, the Right Hon. Lord Carlingford (Lord President of the Privy Council) occupied the post of honour. In performing the opening ceremony, he was accompanied by the Mayor of the City (Alderman Hopkinson), the Town Clerk (Sir Joseph Heron), Members of the Corporation, the High Sheriff of Lancashire (Mr. Thomas Ashton), Sir Philip Cunliffe Owen, the Mayors of Salford and Oldham, Members of Parliament for local constituencies, and others. After the ceremony, Lord Carlingford was entertained by the Mayor; and later a *soirée*, at which a large number of guests were present upon the Mayor's invitation, was held in the Town Hall, the state apartments being thrown open to the visitors. In the course of the evening addresses were delivered by Lord Carlingford, Mr. Slagg, M.P., Mr. William Agnew, M.P., Sir P. Cunliffe Owen, and other gentlemen. The Mayor, at the commencement of the proceedings, briefly sketched the history of the Royal Institution, and stated the circumstances and conditions under which it had become the property of the Corporation in trust for the benefit of the citizens. "I congratulate all my fellow citizens," he said, "high and low, rich and poor, who have a sense of beauty, upon the new era of advancement which is ushered in to-day by the opening of an Art Gallery to be maintained out of

the City rates for the common good of all, without distinction of rank or class. We are learning slowly, but not less surely and satisfactorily, what great things can be done by means of the rates for the promotion of the health, comfort, education, and enjoyment of the people. We have proved that these are fitting objects for the exercise of our united energies by the eminent success of our Public Free Libraries and Parks. We have proved that a Municipal Council is capable of managing such institutions; that local taxation is a fairly equitable basis for the incidence of the burden; that the advantages to be derived are limited only by the capacity of the individual to avail himself of them; and that the sense of individual possession guarantees the safety of the public property which is provided for the use of each and all. Fortified by this experience," he went on to say, "we now essay a new departure. What in London has been done at the cost of the nation we may do, in our own way, at our own cost, for our own good. We are weary of the too costly luxuries of the policeman and the inspecting officer. We have a strong longing coming over us to have something to see for our money when we have spent it. Wickedness, ugliness, dirtiness, offend us now more than they used to do. We groan under these burdens, and are determined to free ourselves from the load by a united effort, by means of the energy of municipal co-operation, and by the effective and equitable money-raising power of the City rate." The sentiments expressed by his Worship were cordially echoed by subsequent speakers.

In the first year of its occupancy of the Art Gallery the Corporation made some much-needed improvements in the internal arrangements of the building—leaving the outside structure untouched—at a cost, including heating and ventilation, of about £5,000. The Committee had placed at their disposal (in addition to the £2,000. a year to which they were entitled from the Corporation) a sum of nearly £1,500. which had been raised by subscription privately, and from the authorities of South Kensington £416. in aid of the purchase of Art Works. With these amounts, ten works in oil and one water-colour were purchased and added to the Permanent Gallery. Amongst the former were: "The Minister's Garden," by Cecil Lawson; "The Ides of March," by E. J. Poynter, R.A.; and "Prince Arthur and Hubert," by W. F. Yeames, R.A.

The Collection was added to very considerably in subsequent years, both by gift and purchase. In the report for 1886 the representatives to the Royal Institution on the Art Gallery Committee said they felt bound to look forward to the time, which seemed rapidly approaching, when the extension of the galleries would become absolutely necessary. "It is," they said, "painful to be compelled to place so many fine works where they cannot be fairly seen. The Art Treasures of the City ought to have assigned to them a Gallery perfectly lighted and in other respects suitable, where they could be seen at all times, and where, being permanently located, they would not suffer the risk of damage by frequent removal. The space at the disposal of the Committee for the Autumn Exhibition cannot be encroached upon for this purpose, as it is even now too restricted."

In 1887, at the request of the Fine Art Committee of the Royal Jubilee Exhibition, the Art Gallery Committee lent many of the finest works out of the Permanent Gallery; and also, at the same time, three pictures were lent to the Committee of the Walker Art Gallery, Liverpool.

For several years subsequently the great difficulties of arranging a periodical exhibition, together with the Permanent Collection, forced themselves upon the Committee's attention, and the hope was expressed that an independent building, centrally situated, which should accommodate the yearly exhibitions, might ultimately be provided. A site for this was recommended in Deansgate on land belonging to the Corporation, but the City Council did not approve of the suggestion.

In the autumn of 1891, the Governors of the Royal Institution represented to the Corporation the urgent need of some practical step being taken with a view to providing additional galleries for the Autumn and Special Exhibitions. The same matter also was seriously discussed by the Art Gallery Committee; and at a meeting held in March, 1892, it was resolved by a majority of seven to five to ask the Council to sanction the removal of the two colonnaded corridors in the Gallery, and to erect in their place two additional galleries. This alteration was ultimately carried out, and though opinions differed as to the advisability on artistic grounds of interfering with the internal features of the building, the result, so

far as accommodation was concerned, was a manifest gain. The alterations and improvements were continued in the following year, and the members of the Art Gallery Committee representing the Council of the Royal Institution were able, in their report for 1893, to express their appreciation of the change in the following terms:—

The galleries are now complete, and have never been seen to greater advantage than at present. As far as they go, they will compare favourably with any Gallery in the country. At the same time it must not be forgotten that the Permanent Collection is each year steadily increasing, and absorbing slowly but surely the space required for the exhibition of contemporaneous works which take place each year; and that, although the wall space has been slightly increased by the addition of two rooms, which were constructed last year in place of the corridors, this is but a mere instalment of what is needed, and it can only be a question of time, and probably a short time, before the absolute necessity of largely increased gallery accommodation must again force itself on the attention of the Corporation. The Manchester Corporation has (it is stated in the same report) won for itself so high a repute in the Art world by its wisdom in securing the series of frescoes by Ford Madox Brown in the large room at the Town Hall, that it ought to become the leader in respect to art matters generally, or at least keep pace with its neighbours, Liverpool and Birmingham.

Recently the Committee has secured for the Permanent Galleries "Autumn Leaves," by Sir J. E. Millais, R.A., described by Professor Ruskin as one of the great pictures of the world; and "Victory, O Lord!" by the same artist. Sir John Gilbert also generously presented a selection from his studio of thirteen pictures and engravings, gifts from the same source having been previously made to London and Liverpool.

It may be added that the City Art Gallery was the first municipal building in Manchester in which the electric light was adopted. It was supplied by an installation on the premises.





The Frescoes in the Town Hall.



THE architect, Mr. Alfred Waterhouse, in designing the plans for the chief rooms in the Town Hall, left spaces for mural decoration. It occurred to one of the members of the Committee that these spaces could not be better filled than with paintings representing the history of the town. He had noticed in Belgium—at Brussels, Courtrai, Ypres, and elsewhere—that the walls of the respective town halls had been turned to good purpose by artists, who depicted in glowing colours the history of Belgium, with the happy result of attracting the attention of the citizens to the history of their native country, of which they were so justly proud.

He suggested to the Committee that a similar plan might be adopted at Manchester, and at the request of his colleagues he prepared a scheme. It was to decorate the five principal rooms with subjects relating to Manchester:—

- (1) The Legends and Poetry of the Town and Neighbourhood;
- (2) The Sports and Pastimes of the District, with Pictures of the Old Halls;
- (3) The History of Inventions: of the Trade and Commerce of the Town;
- (4) The Scientific and Literary; and, lastly,
- (5) The General History of Manchester.

On the 19th January, 1876, the architect reported that he had been in communication with Mr. H. S. Marks, R.A., who took much

interest in the scheme, and expressed his willingness to paint the "Sports and Pastimes of Lancashire" in the twelve panels of the large hall, "at an extremely moderate charge." (It is greatly to be regretted that Mr. Marks' services were not engaged for one of the rooms.)

The following Sub-Committee was appointed to consider the letter :
The Mayor (Alderman Curtis), Alderman Heywood, Councillors Harwood and Joseph Thompson.

In a further report, dated June 21st, 1876, Mr. Waterhouse said :

Although the question of the pictorial decoration of the principal rooms was left with Mr. Thompson at the last meeting, my interest in the subject induced me while across the channel to visit most of the principal cities of Belgium, where some distinguished historical painters have been engaged in decorating the walls of the town halls and other public buildings.

The two living artists whose work appears to me to accord best with Gothic architecture are Mons. Guffins and Mons. Schwertz. These artists generally work together, painting alternate pictures, and so similar are their style and execution that it is difficult to distinguish the work of one from that of the other.

Those who have recently seen the Council Chamber of the Town Hall at Courtrai will remember the excellent work of these artists there, realising one's ideal of what mural painting should be. The medium employed is the water-glass, believed to be indestructible.

What I saw in Belgium convinced me also of the superiority in certain respects of paintings done upon the walls themselves over those on canvas.

The subject of the mural paintings named in this report and the suggestions made by the foreign artists were referred to the Decoration Sub-Committee, with instructions to present a report as to what, in their opinion, was desirable in relation thereto.

The Sub-Committee visited the principal cities of Belgium, and were greatly impressed with the beauty and suggestiveness of the paintings which adorned the town halls, and they recommended that a similar plan should be adopted at Manchester. Their recommendation was approved by the Council.

A difficulty then arose as to the selection of the artists. The Sub-Committee had been so greatly impressed with the work of the Belgian artists that they were inclined to recommend their engagement, but it was not popular with the public, and was abandoned.

They reconsidered the subject, and on 20th June, 1877, presented a report to the General Purposes Committee, in which they said

they had been in correspondence with artists who had been selected as possessing special qualifications for the work in question, and they recommended the adoption of the following arrangements:—

1. The panels in the Public Hall to be painted by Mr. Ford Madox Brown and Mr. F. J. Shields, each of these artists taking one side of the room.
2. The panels in the Banqueting Room to be painted by Mr. W. F. Yeames, A.R.A., the subject being (at his suggestion) "of a joyous nature, such as have reference to the entertainments given in a town hall."
3. The Reception Room to be painted by Mr. Philip Calderon, R.A.
4. The Mayor's Parlour to be painted by Mr. W. B. Richmond, the subjects suggested "being symbols of what may be called the elements of 'Industry, Wealth, and Social Order,' or Idyllic versions of the operations of agriculture in respect of corn, cotton, and other products."
5. The Ante Room to be painted by Mr. Walter Crane, the subjects all having reference to the relations of Manchester with India.

Mr. Brown and Mr. Shields proposed to adopt the water-glass process, and purposed visiting Belgium, where they could have the advantage of studying the process under Baron Julius Leys. The other artists proposed to adopt some process of tempore painting fixed with wax.

The Manchester Academy of Fine Arts sent a deputation in August, 1877, to the Committee, and strongly urged that the paintings should be executed by Lancashire artists, and that one artist should have the superintendence of the whole building. It is well worth while to reproduce some of their arguments:—

First.—It is necessary, to ensure the success of the whole scheme of decoration, that the most perfect unity should be maintained: unity in sequence of subject, unity in manner of treatment, and unity with the spirit of the architecture. To ensure this unity it is essential that the paintings shall be executed under the direction of one man, who shall be responsible to the Council for the success of the whole work.

Second.—We think that the subjects of the mural pictures ought to be derived from the history, customs, and life of Lancashire in general and Manchester in particular. Say, for instance, the twelve spaces in the Public Hall might be devoted to subjects from the history of Manchester, selected so as to cover a period, say, of twelve centuries. The Banqueting Hall might be devoted to quasi-historical subjects, illustrating our ancient chivalry, and so on. The remaining three rooms—viz., the Ante-Room, Reception, and Mayor's Parlour—might be given up to the illustration of Lancashire Life, its industries, sports, poetry, &c.

Oil was considered the only medium that could be used satisfactorily, and canvas on panelled stretchers the only safe ground.

This memorandum was signed by thirty-seven artists.

It will be seen that, as regards the subjects to be painted in the various rooms, it adopted the suggestion made by a member of the Sub-Committee more than a year previously, and it is to be regretted that the scheme was broken through. Some of the paintings in the large room do not strictly belong to Manchester, nor to Lancashire, nor is there an exact unity of subject in the series—military, religious, commercial, scientific, and educational subjects being gathered together.

But there was one subject—the use of oil on canvas—which created much discussion, not only in Manchester, but in London. The artistic world was divided in opinion, and some asserted that the decay of the frescoes in the Houses of Parliament should not unduly prejudice the Council against painting upon a carefully-prepared background of plaster. Much enthusiasm was displayed upon one point—the opportunity that would be given to a master-mind to prepare a general scheme of colour, an harmonious grouping of subjects, and a continuous story of civic life upon the walls of the buildings: here would the master have his pupils about him, and here would he train a school of artists in mural decoration. To this end a man experienced in the painting of frescoes ought to be selected, and he should be one of commanding ability.

It was ultimately arranged to give the commission for the twelve paintings to Mr. Ford Madox Brown and to his friend Mr. F. J. Shields. Alderman Joseph Thompson's long list of subjects was carefully sifted, and the following were selected:—

1. A.D. 79. Building of a Roman Fort by Agricola. Representative of the Roman Dominion in Britain, and the Foundation of Mancunium.
2. A.D. 620. The Baptism of King Eadwine. This took place at York, and its only connection with Manchester is that both were in the province of Deira; but the artist liked the subject, as an illustration of the Anglo-Saxon period and of the establishment of Christianity in Northern England.
3. A.D. 870. The Danes seize Manchester after an obstinate defence by the Anglo-Saxon inhabitants. (Danish invasion.)

4. A.D. 1330. Edward III. established Flemish Weavers in Manchester. (Origin of the commercial industries of Manchester under the Norman sway, then identified with English interests.)
5. A.D. 1377. John of Gaunt, Duke of Lancaster, supports Wyclif before the Consistory Court at St. Paul's Cathedral as against Bishop Courtnay. The people defend the Reformer. (Lancashire represented by its titular Duke in connection with the earliest movement of the Reformation in Europe.)
6. A.D. 1566. The Court Leet try and stamp all Weights and Measures. (Illustrative of commercial integrity.)
7. A.D. 1639. Humphrey Chetham, a Manchester Merchant, founds a School for 40 healthy boys. (Bishop Oldham had founded the Manchester Grammar School prior to this date (in 1515). Chetham's foundation was selected in preference, as the founder was a layman.)
8. A.D. 1639. William Crabtree discovers the Sun's parallax by observation of the transit of Venus at his house on Kersal Moor. The chief merit of this discovery is due to Jeremiah Horrox, curate of Hoole. Horrox, although a very young man, was a great mathematician. He calculated the hour of the transit, and he knew that it would occur about the time when he had to conduct the Sunday afternoon service; he therefore arranged with his friend Crabtree to make the observation; but he himself was rewarded by watching the transit.
9. A.D. 1642. Colonel Rosworm defends Manchester against Lord Strange; fight on Salford Bridge. The first blood of the Civil War was drawn at Manchester.
10. A.D. 1745. Manchester taken for the Pretender by a drummer, a boy, and a woman; or, a review of the Manchester Regiment of 300 men, in the Collegiate Churchyard, by Prince Charles Edward. (Jacobite rising in the Georgian period.)
11. A.D. 1753. John Kay, inventor of the Fly Shuttle, saved by being carried off in a wool sheet as the mob are breaking into

his house at Bury. (Destruction by the mob of machinery, although it was in great part the cause of Manchester's prosperity.)

12. A.D. 1761. Opening of the Bridgewater Canal by the Duke of Bridgewater and Brindley, his engineer. (Development of trade by water carriage.)

This was the adopted list, but at the suggestion of the artist neither of the pictures relating to the Pretender was finally accepted : Dr. Dalton experimenting with marsh gas was substituted.

In May, 1891, Mr. Shields definitely retired from the work. He felt utterly unable to think and act amidst the interruptions the artists were put to by people coming in and out of the room, and by the multitudinous noises which pervaded the place. It was impossible for him to paint on the spot. No doubt these causes were quite sufficient to appal a sensitive man ; but it is strongly impressed upon the writer of these lines that there was also a generous motive behind it all—that his friend and master should have the honour and glory of completing the whole series of paintings.

In bringing this sketch to a conclusion the writer cannot but congratulate his colleagues in the Council and his fellow-citizens upon the possession of the noble series of frescoes which add beauty and dignity to their Town Hall. The pictures may be of unequal merit and interest. There may be traces of the weariness of old age, of deep-seated sorrow, of physical decay in one or two of the later pictures ; but there are in all of them evidences of earnest study and mastery of the subject in hand, of great charm of colour, of a masterly combination of a preconceived scheme. Manchester will increasingly grow proud of its civic gallery of local history, and will revere the memory of the man who devoted years of conscientious study and hard work to accomplish worthily the task to which he had set his hand and to which he had given his heart.

Mr. Brown painted his last picture under the disadvantage of great physical pain and weakness, and he died in a very few weeks after it had been placed in its position in the hall.

The scheme for decorating the other rooms in the Hall was set aside until the total cost of the building was ascertained. That amount has long been known, and a large sum has been paid to the sinking fund. May not the question, therefore, be asked, whether the Corporation should not now complete the work that it began so many years ago?

It may also be stated here that the heraldic shields in the roof of the large hall are representative of those countries and cities that trade with Manchester.

J. T.

DESCRIPTION OF THE MURAL PAINTINGS.

[The following descriptions are those drawn up by the Artist, with some revision.]

1. THE ROMANS BUILDING A FORT AT MANCENION.—This subject embodies the foundation of Manchester; for, although there would be a British settlement, it is improbable that anything worthy the name of a town existed before the Roman Mancunium. The precise date of the Roman station is unknown. Agricola was Governor of Britain, A.D. 60, and was, as his son-in-law Tacitus informs us, a humane as well as an energetic Governor. His rule was much connected with this part of England, so that the General depicted may be considered as representative of that Governor. A centurion holds the parchment plan of the camp that is being fortified; while his chief, who also has hold of it, gives his orders. His standard bearer, in this instance a "Dragonifer," holds up the silken, wind-inflated Dragon standard, which the Romans at this period had adopted from the "Barbarians." The Legionaries are doing the masons' work; but the bearers of stones and cement are Britons, impressed for the occasion. The River Medlock bounds the camp on the south; the background beyond it is formed of oak-forests, red with the last leaves of November, while in the extreme distance is visible the blue streak of the distant Peak hills. A chilling wind is depicted as agitating the garments of the conquerors, and making the work in hand more arduous to men of southern nationality. The General's wife, with her little boy, has stepped out of her "cathedra," or litter, to take the air on the half-finished ramparts. She wears a fur cloak, hooded for the cold, and on her

hands are muffles. Her naturally black hair is represented as dyed yellow—her eyebrows remaining black—to indicate the luxury of Roman living, even in a camp. Her little son, who is attired in soldier's uniform and "caliga" (boots), is mischievously aiming a kick at one of his mother's Nubian slave chair-bearers. The interior of the camp, with the Roman four-square tents made of skins, is to be seen behind this group.

2. THE BAPTISM OF EDWIN—Edwin was King of Northumbria and Deira, and was baptised at York, his capital, A.D. 627, and the next day 11,000 of his principal subjects were baptised together in the River Swale, and his dominions became Christian. Manchester formed part of the kingdom of Deira, and was, therefore, under the rule of Edwin. Edwin, who in his youth had been a fugitive and "tutored in the school of sorrow," having regained his inheritance of Northumbria, and successfully annexed the surrounding country, sought in marriage the hand of Ethelberga, daughter of Ethelbert, the Christian King of Kent. Bertha, the Queen of Ethelbert, and daughter of Clovis, the first Christian King of France, had stipulated that on marrying the King of Kent she should be allowed her Church, and the free exercise of her religion, and this being conceded, after a while she effected the conversion of her husband. Ethelberga, their daughter, before uniting herself to Edwin, demanded the same concessions, and was rewarded with a like result. She and her Bishop, Paulinus, whose appearance Bede minutely describes, persuaded the King to be converted about six years after the marriage. Wordsworth, in his sonnet on Paulinus, thus beautifully paraphrases the elder writer:—

" But, to remote Northumbria's Royal Hall,
Where thoughtful Edwin, tutored in the school
Of sorrow, still maintains a heathen rule,
Who comes with functions apostolical?
Mark him, of shoulders curved, and stature tall,
Black hair, and vivid eye, and meagre cheek,
His prominent feature like an eagle's beak;
A man whose aspect doth at once appal
And strike with reverence. * * * * "

A small wooden church, Bede tells us, was hastily constructed for the purpose; this being pulled down afterwards, a stone church was erected in its place, on the site of the present York Minster. A Roman mosaic pavement is represented as having been used as

foundation for the wooden church—as well because at this early date classical remains were frequently incorporated with pagan buildings, as to indicate the connection of this panel with the subject of that of No. 1, which is to represent the Romans in Britain. Bishops, at this date, had not yet adopted the mitre, the first indications of which are found only in 11th century monuments. Edwin was a wise and valiant King, who, but for his death at the age of 48, in a battle with Cadwallader, King of Wales, might at this early date have united all the Kingdoms of the Heptarchy under his dominion.

3. THE EXPULSION OF THE DANES FROM MANCHESTER.—Rushing down the narrow and winding street of a small wood-built city, the Danes are seen making for an open gateway that discloses the country outside, with a Saxon church on a hill. The Norsemen, who organised the plundering expeditions that at this time so much harassed Europe, used to begin their apprenticeship to rapine very early. Fifteen is said to have been about the age when they would start off in quest of adventure, and of that booty on which, a few years later, they would settle down upon as respectable married men and heads of houses. The Danes are here represented, therefore, as very young men, mere beardless boys in fact, with one or two better seasoned elders to assist them with their experience. The wealth which they acquired they were wont to convert into gold bracelets, which were worn on the right arm. A rich and successful young chieftain, the wearer of many bracelets, but now badly wounded, is being borne past on a hastily-constructed stretcher, his companions endeavouring to protect him and themselves with their uplifted shields, as they run the gauntlet of the town's-folk's missiles. In front of these a group of four men have fallen confusedly, one over another, on the ground: the pavement consists of the polygonal blocks of which the Romans had formed the road that ran through Manchester. From a house which faces this scene a young woman has thrown a tile that strikes down the "Raven" Standard-bearer. An aged inmate from the same window throws a spear, the national Saxon weapon, while two little boys gleefully empty a small tub of boiling water on the fugitives. The Danes, who in a group have reached the shelter of the rampart-gate, pause for one moment to hurl back threats of future revenge on the inimical town's people, whose chained-up dogs bark fiercely at the runaways, while in the background the soldiers of Edward the

Elder are seen smiting the unfortunate loiterers in the race for life. By command of this King, Manchester, which had suffered greatly from the Danes, was re-edified A.D. 923.

4. THE ESTABLISHMENT OF FLEMISH WEAVERS IN MANCHESTER.—

This subject commemorates the foundation of Lancashire supremacy in textile manufactures. Philippa of Hainault, Queen of Edward III., is said to have advised the introduction of the Flemish weavers into England, and tradition mentions yearly visits which it was her custom to pay them. John of Gaunt, the seat of whose government as Earl Palatine of Lancashire was at Lancaster Castle, was the son of Philippa. Flemish weavers are said to have been established in Manchester; hence the connection of the Queen with this subject, although it is not recorded that Philippa visited this City. The season chosen is spring: still the finest part of the year in Lancashire, at which season Chaucer tells us the English people delighted "to gon on Pilgrimages." The Queen and her attendant ladies have been in the woods "maying," according to the old English custom, and each has broken a branch of flowering hawthorn, or may. They are habited in "Lincoln green" for the occasion. To the left, a Fleming, of somewhat careworn aspect, his Flemish beaver slung over his back, exhibits to the Queen a piece of cloth the same in colour as that she wears. He is assisted to unroll it by his wife, their child, and a workman. Behind him stands his aged father, ready with a roll of cloth of a different shade. The Queen tries the texture and substance of what is submitted to her with scrutinising finger. On the same side of the composition a row of street children have been tutored to kneel in presence of Royalty. One little girl, forgetting her baby's crying, all the same ventures to make faces at the Flemish girl with the wooden shoes to the right of the picture; while a ragged little boy, comfortably seated on the steps of the market cross, is admonished to go down with the other children. To the right of the beholder an old weaver, by the name on his cloth "Jan Van Brugge," is seated beside his apprentice at looms which are drawn out to the front of their small shop, under the shutters, raised pent-house fashion. They are weaving, or pretending to do so, but the master is eagerly looking for the Queen, while the apprentice is as eagerly looking at his master's daughter; she, trifling with a kitten, affects to see no one. In the distance are

three archers of the Queen's guard, and two Burghers of Manchester on their knees. The Queen's palfrey is held by a foot-page, hot with keeping up beside the horses. The sun illumines all to the left of the spectator, the figures to the right being in reflected light. Edward married Philippa in 1328, and the first Flemish weavers were invited to England soon after. Philippa died in 1368. John of Gaunt was born in 1340.

5. THE TRIAL OF WYCLIF.—John Wyclif, to whom we owe the first translation of the whole Bible—no complete version being current before his time—was born at Hipswell, Yorkshire, about the year 1325. He has been styled “The Morning Star of the Reformation,” and well deserved the appellation, for recent researches in Germany show that many of the Latin tracts published by John Huss a century later were in reality composed by Wyclif; and John Huss led the way to Luther and Reformation almost another century later. But our world-renowned Englishman was not only an innovator and thinker of great originality, he was also one of the greatest scholars of his age. He was Master of Balliol College, Oxford, before his fortieth year—though he soon resigned the position—and possessed, seemingly, of unlimited attainments for those times, he was not a mere student, but withal a man of the world much employed politically by Edward III. and his Parliaments, being delegated as Royal Commissioner, first to the Pope at Avignon, and again to the Peace Conferences at Bruges. Gradually, as his ethical views of Christianity became confirmed, he gave up the pluralities with which the Court had rewarded his services, retired to his rectory at Lutterworth, abandoned soft living, and, going barefoot himself, began organising that company of poor itinerant preachers (somewhat on the model of the barefoot friars) which soon was to spread itself over the length and breadth of England. The Court of Rome at last thought it time to intervene, and caused Wyclif to be cited before Convocation in Old St. Paul's, London. On 19th February, 1377, he there accordingly appeared; but his great patron John of Gaunt, Duke of the County Palatine of Lancaster—son of the King, and practically Prime Minister at that time—appeared by Wyclif's side, with Lord Henry Percy, the Earl-Marshal, and soldiers, for his protection. The trial, from six o'clock till nine of that winter morn, was little else than an unseemly dispute between John of Gaunt, on the one hand, and Courteney,

Bishop of London, on the other, till the citizens of London, fancying they heard the Duke threatening their bishop "to pull him out of the church by the hair of his head," began such a riot that the trial had perforce to be postponed, and Wyclif was suffered to resume his duties at Lutterworth. In the composition, near to Courteney on the dais, sits Simon Sudbury, the Archbishop of Canterbury, depicted as endeavouring, in whispers, to assuage the indignation of his colleague. At Wyclif's feet are seen the five Mendicant Friars appointed as his counsel, Wyclif not yet having publicly differed from them doctrinally. The Earl-Marshal is represented as ordering a stool for the reformer, for, said he: "An you must answer from all these books, Doctor, you will need a soft seat," causing the Prelate still greater indignation; but Wyclif remained standing. Constance, John of Gaunt's second wife (a Princess of Spain, and daughter of Pedro the Cruel, in whose right he styled himself King of Castile), is shown plucking her spouse back by his mantle, as though in fear he might in his excitement do some injury to the Prelate. In the background, Chaucer, the Duke's other protégé, is seen taking notes on his tablet. John Wyclif died peacefully in his rectory at Lutterworth, 28th December, 1384.

6. THE PROCLAMATION REGARDING WEIGHTS AND MEASURES.—In 1556 the Court Leet of the Manor of Manchester passed an edict directing all measures and weights to be sent in on a certain day to be tested. Although there were probably earlier regulations, this is the first date that can be attached to a rule laying the foundation of commercial integrity in the town. The Records of the Court Leet, or "View of Frank-Pledge" as it was also called, have been reprinted by the Corporation of Manchester, and give minute details as to the former government of the town. They present a striking and singular picture of English manners and customs, especially in the 16th century, and contain such strange and oft-repeated enactments that many reliable authorities are now of opinion they were in reality never carried thoroughly out, but only represented a sort of moral force. In the small town of Manchester of those days there were Four Dog-muzzlers, each responsible for the dogs of his own district. Accordingly the Bellman's, or Watchman's dog, is duly muzzled as by law required, and patiently attends his master, who, with his bell and his lantern and pole of office, is seen calling out the order of the

Court: that on a certain day of the Reigns of Philip and Mary "The Burgesses and others of the Town of Mancestre shall send in alle manere of Weights and Measures to be tried by their Maiesties standard." The immediate effects of this proclamation may be seen in the countenances of the master and mistress of a small sutler's, or general provision shop, depicted in the centre of the composition: the man listening in anxious and undisguised indignation, while his wife removes some butter adhering to the bottom of her scales. On the left of them their young son, in the blue and yellow garb of King Edward's School, with his bow and arrows as required by law, lingers to hear; another boy attracted by the bell runs towards these. On the further side of the picture a man on crutches has left his house to listen also to the cryer. On the doorstep of the shop a beggar-girl has seated herself; near her on the ground is her porringer, or leaden-lidded clap-dish, with the clapping of which beggars seem to have been entitled noisily to arouse public attention. She is exposing to the commiseration of the charitable an exceedingly well-fed but half-naked baby.

7. CRABTREE WATCHING THE TRANSIT OF VENUS.—William Crabtree, of Broughton, clothier, having been requested to assist the observations made by his friend Jeremiah Horrox, the curate of Hoole, watched the Transit of Venus over the Sun, November 24th, 1639 (old style—that is, our 6th December). Horrox, who was poor and alone, and who died before he was two and twenty, might never have made his world-renowned observation had not Crabtree assisted him by letter as to his books of tables. The Transit had been overlooked by Kepler, but predicted in a blundering manner by Landsberg. By the aid of the new and corrected tables Horrox's calculations came right. The day for the expected event being a Sunday, Horrox asked his friend to watch for him also, lest his clerical duties should interfere with his observing the phenomenon at the right moment. The weather being cloudy, Crabtree watched through that cold winter day from nine a.m. to close upon four p.m., when suddenly a gleam of sunlight revealed the small figure of the planet crossing the sun's disc on the paper diagram. Crabtree was so perturbed as not to be able, during the few moments the phenomenon remained visible, to take measurements scientifically, but he could corroborate Horrox's observation. The young curate's papers, describing the *modus*

operandi of the observation were published after his death by Huyghens. This *modus* admitted of Crabtree's wife and children being present. The Manchester astronomer was married in 1633 to Elizabeth, daughter of Henry Pendleton. Crabtree is represented as employing for his observatory a sort of store-room over his shop, or counting-house; a glimpse of the latter is seen through the open trap-door, admitting some daylight, though the scene is chiefly lighted from the sunshine on the diagram. Mrs. Crabtree, who is depicted knitting, which was accounted a lawful Sunday recreation in anti-Puritanical days, clutches her young son by the arm, in anticipation of his possible interference with his father's proceedings at such a supreme moment. It is to be noted that this was the first occasion on which the Transit of Venus was observed, and that only by these watchers in Liverpool and Manchester was it seen.

8. CHETHAM'S LIFE DREAM.—The Blue Coat School in Manchester, which still bears the name of its founder (Humphrey Chetham), was established in accordance with the terms of his will in 1656. The school (combined with the library, endowed by him) forms no doubt a precursor in the 17th century of those schemes, educational and philanthropic, which so prominently distinguish the 19th. Like his fellow-townsmen Crabtree, Chetham was a "clothier," or chapman—terms equivalent to merchant now-a-days; but his wealth, great for those days, was largely supplemented by financial transactions of a nature kindred to banking or money-lending. True, however, to the ideal of his life, his will—which occupies four sheets of parchment, and was during his life frequently altered—is chiefly taken up with directions to his "feoffees" or trustees for the purchase of the buildings known as the College, and formerly used as the Baron's Hall, and then for the residence of the Warden and Clergy of the Collegiate Church of Manchester, and for their conversion into a school and library. During his life he boarded out and educated twenty-two poor boys; after his death the number was to be augmented to forty—a number which is now more than doubled, owing to the increased value of the bequest. In the painting, Chetham is represented as studying his will in the garden of the College, which in imagination he has peopled with his "forty healthy boys" and their pedagogue. The school-cook is impatiently awaiting the butcher. The scholars are engaged in drilling, reading, leap-frog, wrestling, and a game called "stools," apparently the forerunner of cricket. Chetham, as

High Sheriff, had forced upon him by Charles I. the invidious honour of collecting the famous "ship-money" in the County of Lancaster, in the prosecution of which official duty he disbursed much of his own money, a loss that he in vain petitioned to have made good to him from the amount collected. Chetham died October 12th, 1653, in his 74th year. The library, also founded in accordance with his will, was one of the first to be entirely free to the public:

9. DEFENCE OF MANCHESTER IN THE CIVIL WAR.—This panel represents the defence of Manchester by the Puritans when it was besieged in September, 1642, by three or four thousand of King Charles's troops under the command of James, Lord Strange, who, by the death of his father whilst the struggle was going on, became Earl of Derby. That is the scene which was chosen for illustration. A previous skirmish between the friends of the Parliament and the retainers of Lord Strange in the streets of Manchester is believed to have caused the first bloodshed of the Civil War. Strange withdrew into Cheshire, but returned and laid siege to Manchester. His operations were conducted from Salford, which was for the King, whilst Manchester was for the Parliament. Lieut.-Colonel John Rosworm, a German military officer of experience, directed the defensive operations. The town forces were commanded by Captain Richard Radcliffe, of Pool Fold, and the auxiliaries, furnished chiefly by the Asshetons of Middleton, were led by Captain Robert Bradshawe, who is sometimes identified as a younger brother of John Bradshawe, afterwards President of the High Court of Justice which condemned Charles I. After some ineffectual cannonading and fighting, the Royalists, having set fire to two barns, renewed the attack, but were beaten back by Bradshawe, and many of them slain. Other attacks were defeated by Radcliffe and Rosworm. After lasting for several days the Earl of Derby, despairing of success, raised the siege. The townsmen received the thanks of Parliament for their spirited defence. At the Salford, or nearer end of the bridge, is to be seen the small chapel which was first built for the good of his soul by Thomas Del Bothe in 1368. It was latterly used as a gaol or lock-up house. The Gothic-arched bridge was built during Edward III.'s reign, and stood from that early date till its destruction in 1837, the year of her present Majesty's accession. The gentleman who has been unhorsed and is being released by his retainers may be Lord Montague, who,

with Lord Strange, aided in the abortive attempt upon Manchester. Captain Robert Bradshawe, who so powerfully contributed to its defence, is seen in the distance firing his musket from a gun-rest, as at this date was customary.

10. JOHN KAY, INVENTOR OF THE FLY SHUTTLE.—John Kay was born at Walmersley, near Bury, 16th July, 1704. This great invention of the Fly Shuttle seems to have been perfected in 1733 at the latter place, where he resided. For three thousand, or perhaps five thousand years, the peoples of the East and West had been content to go on "throwing" the shuttle with the naked hand, and even as late as the middle of the eighteenth century, in order to weave wide blankets, a couple of weavers were needed at the loom "throwing" the shuttle from one to the other. Henceforth, through the unique intellect of this Lancashire gentleman, all was to be changed. A single one-armed weaver could now get through work that before would have needed the four arms of a pair of weavers, and this with the sole assistance of a string and a handle thereto attached. About twenty years after, however, the weaving population began to notice this fact, and rioters broke into Kay's house at Bury with the most sinister intentions. Tradition tells us that his wife saved him from their fury by having him hurried away concealed in a wool sheet. In the composition to the left, the rioters are seen smashing in the windows, whilst on the floor in front of them lies an exemplification of the cause of the discord—the very simple invention by means of which two boxes fastened to the loom throw the shuttle, so to say, to and fro into each other's mouths. Kay's son Robert, a boy about twelve, is depicted cautiously watching the rioters, and hastening his parent's movements; whilst Mrs. Kay and two workmen hurry the departure of their master, for whom a cart waits at the door. Kay, with his still disengaged hands, draws his wife towards him and imprints what may be a last kiss on her cheek. His two little girls are weeping and wringing their hands. But for Kay's simple, yet epoch-fixing invention of the shuttle which, without hands, flies backwards and forwards across the loom, all the wonders and achievements of steam-weaving would never have been perfected. But however disastrous to him this inroad of the men might be, the combination of the masters to resist in the law courts his just claims to royalties proved even more so, and Kay retired to France a

ruined man. An application made to Parliament, early in the present century, for the benefit of his descendants was also unsuccessful.

11. THE OPENING OF THE BRIDGEWATER CANAL.—Francis, Duke of Bridgewater, after whom the Canal was named, undertook this great and, in those days, original work, under the advice and direction of the eminent engineer, James Brindley. The Duke was then comparatively young—20 years younger than his engineer—and he took up the work in order to facilitate the transport of the coals on his estate to Manchester. During the progress of the Canal he lived in a house near by, with no companions but his engineer and his estate agent. Such was his enthusiasm for the undertaking that his only diversion from it seemed to be, every five minutes during the evening tapping the barometer, with a view to the next day's work; a pipe and a glass of water his only refreshments. He had been engaged to one of the two beautiful Misses Gunning—the widowed Duchess of Hamilton—but having quarrelled with his intended about her sister, with whom he desired all intimacy should cease, as scandal was free with her name, he never noticed any woman again. He died immensely rich, and collected the Bridgewater Gallery of Old Masters. Brindley, the engineer, used to make his calculations on a method of his own that few could understand, for he could barely write, and of orthography was quite ignorant. When a Parliamentary Committee doubted his plans for carrying water across hills, he procured a hundredweight of clay, and, in their presence, modelled a canal with it, which held every drop of its water till next day, and so convinced them. He married a schoolgirl of 15—commencing the courtship by taking her bags of sweetmeats—who made him an excellent wife. The opening of the Bridgewater Canal took place at Barton Aqueduct, over the River Irwell, June 17th, 1761. It is represented in the fresco by the first barge starting for coal drawn by a pair of mules. The bargee's wife steers the boat, with her twin babies (gaily dressed for the occasion) tied on the cabin roof in front of her. The Duke, from one of his own barges, witnesses the proceedings. Brindley, who always had about him a wicker-coated flask of brandy, with which to lessen the severity of his arduous duties, reminds his Grace (who was not of a convivial turn) that he has omitted providing refreshments. A boy has been sent in a boat by farm-people living down the canal to fetch coals. The Duke's orders were always to execute *the smaller orders first*.

12. DALTON COLLECTING MARSH GAS.—John Dalton, the author of the Atomic Theory, was born at Eaglesfield, near Cockermouth, in Cumberland, September 5th, 1766. When twelve years old he started a school in partnership with a brother only a few years older. The stronger pupils, it is stated, would challenge Dalton to fight on his offering to correct them. For many years of his life he maintained himself, in Manchester, by teaching mathematics and natural philosophy in New College, then in Mosley Street, but this laborious, if honourable, occupation did not hinder him from indulging in the most abstruse and far-reaching speculations and researches; the result being that this Manchester schoolmaster, alone and unassisted, made himself the father of modern chemistry—that is, if chemistry is one of the exact sciences, and not a succession of independent experiments. How the idea of the Atomic Theory first presented itself to his mind it would be interesting to know, but we know little of it. All we hear is, that it occurred to him as required in order to explain certain remarkable phases of matter which combine in some proportions and not in others. Once that the idea had taken hold of his mind, he never abandoned it till he had worked it out. The natural gases presented the readiest mode of investigation; so he is represented as collecting marsh gas, one of the natural and primitive forms of gas. The mode of getting it is the usual one of stirring-up the mud of a stagnant pond, while an assistant (in this case a farmer's boy) catches the bubbles, as they rise, in a wide-mouthed bottle, having a saucer ready to close up the mouth under the water when the bottle is full. A group of children are watching him, and the eldest, who has charge of them, is telling the little boy who is bent on catching sticklebacks that "Mr. Dalton is catching Jack o'Lanterns"—marsh gas being, when on fire, the substance *the Will o' the Wisp* is composed of. Dalton's great discovery of the Atomic Theory met with slow recognition at first; but it won its way. The French Institute made him one of their eight foreign members, and treated him with the highest distinction while in Paris; the English Royal Society elected him, without his consent; and he was pensioned by the government of William IV. In Manchester he was held in universal favour; and Chantrey's statue of him was placed, during his lifetime, in the Royal Institution, and subsequently removed to the vestibule of the Manchester Town Hall, opposite to which is placed the fine statue, by Gilbert, of Dr. Joule. He died in July, 1844.



The Court Leet Records and Constables' Accounts relating to the Manor of Manchester.



WHEN the Corporation purchased the manor of Manchester in 1846, it was urged upon them by the late Mr. John Harland, F.S.A., that they ought to obtain possession of the old Court Leet Records relating to the manor. These were accordingly handed over by the solicitors to the late Sir Oswald Mosley, Bart., the then lord of the manor, and the seven folio volumes, in which they were contained, remained in the muniment room of the Corporation until the year 1881. At the meeting of the Council held on the 5th October in that year the then Mayor, Alderman Thomas Baker (afterwards Sir Thomas Baker, Knt.), called the attention of the Council to their existence, and described them "as containing the earliest, most trustworthy, and important information of the government of the town and of the domestic life of Manchester anterior to the granting of the Charter of Incorporation," and he moved a resolution to appoint a Committee to inspect and report as to the desirability of having them printed. This Committee met on several occasions, and on the 2nd August, 1882, presented their report, in which they described the value of these Records, which, with the exception of one volume, relating to the period 1687 to 1731, were quite complete from the year 1552 down to 1846. This report was received with much interest, and it

was decided that these valuable Records should be forthwith printed under the supervision of a committee, known as "The Court Leet Records Sub-Committee."

By this Committee, and with the approval of the Council, the editorship of these Records was entrusted to Mr. J. P. Earwaker, M.A., F.S.A., a well-known local antiquary, and the author of a voluminous history of "East Cheshire," which had been very highly spoken of.

The first volume, containing the Court Leet Records from the year 1552 to 1586, appeared in the summer of 1884 in a thick octavo volume of nearly 300 pages, the original manuscript being printed *verbatim et literatim*, with careful annotations and all necessary explanations. The editor also prefixed a very useful Introduction, in which the history and the duties of Courts Leet were discussed at considerable length. At the end of this Introduction he referred to the question which might often be raised, as to what was to be gained by the publication of these Records in full, and he explained how important it was that as far as possible all the old historical records of the kingdom should be committed to print, with the view not only of permanently preserving them, but also of making them accessible to all. He then went on to show how "in this respect the Corporation of Manchester is setting a most laudable example to its neighbours and to the country generally, in thus placing on permanent record the most ancient and important documents which it possesses," and which "illustrate the past history of Manchester in very many different ways, so that we get a glimpse of what the Manchester of 300 years ago was like, and of those who then directed its affairs and laid the foundation of its present greatness."

The second volume, embracing the Records from 1586 to 1618, appeared in 1885, the third in 1886, the fourth in 1887, and so on, till the twelfth and concluding volume was printed in 1890. To each of these volumes the editor added a carefully prepared Introduction, and also illustrated the text with all necessary explanations and very copious notes, particularly in the earlier volumes. These notes, which contain information of much historical and genealogical value, were based on original documents, obtained by much labour and research. The Introduction to the twelfth and concluding volume

dealt in a very exhaustive manner with the history of the incorporation of the town and the subsequent purchase of the manorial rights. The date of this purchase was the 6th May, 1846, and the cost was £200,000, of which £5,000 was paid down, and it was arranged that the balance should be paid in annual instalments of £4,000.

A limited edition only of these Court Leet Records was printed, and a copy of each volume, as it appeared, was given to each of the Aldermen and Councillors. Complete sets were also presented to the chief English and American Libraries, and are occasionally given to distinguished strangers who from time to time visit the City and are entertained by the Corporation. They are also on sale to the general public at a moderate price.

The publication of these Records was very well received by the Manchester press, and as the volumes appeared they were the subjects of many appreciative reviews. Thus the *Manchester Guardian* of December 29, 1882, in announcing that the Corporation had entrusted to Mr. J. P. Earwaker "the onerous task of preparing the Court Leet Records for publication," went on to say that "Mr. Earwaker's fitness for the duty is amply evidenced by the good work he has already done. He may be congratulated on his appointment to a task so congenial, and the City may also be congratulated on having a son who possesses in a conspicuous degree the learning and energy necessary for the success of the undertaking."

When the first volume was published, the *Athenæum*, the leading English literary journal, honoured it with a notice of four columns on the 10th Oct., 1885, in which, after alluding to the importance of printing these old historical records, it stated that "a Committee had been entrusted with the publication of these documents, and as far as we can judge from the volume before us, the work is likely to be carried out in a most excellent manner. . . . As there is not a page in the volume which does not contain matter of interest, we might extend our quotations to a far greater length; we have, however, we trust, said enough to indicate how very valuable a contribution the Corporation of Manchester has made to our knowledge of the town life of former days. The book is well edited, and the notes, especially those relating to the persons mentioned in the

text, are most interesting." Other equally appreciative reviews appeared in the same journal as the subsequent volumes were issued. On the 13th February, 1886, when the second volume had been printed, the *Manchester City News* wrote that "Mr. J. P. Earwaker has done his work with scrupulous care and tireless industry, and has illuminated the text with an abundance of acceptable annotations." Many other similar notices might easily be given.

During the time that these Court Leet Records were being printed, the Corporation was fortunate enough to acquire two valuable volumes, containing the CONSTABLES' ACCOUNTS for the Manor of Manchester from 1612 to 1647, and from 1743 to 1776. The former of these was bequeathed to the Corporation by the late John Leigh, Esq., M.D., Medical Officer of Health to the City, and the latter was purchased at the sale of the library of the late Mr. James Crossley, F.S.A. Both of these volumes had originally formed part of the manorial records, but had been parted with in ignorance of their real value many years previously, and it was considered that the Corporation had been very fortunate in obtaining them again. As they illustrated the past history of Manchester in a very interesting manner, and were also supplementary to the Court Leet Records, it was decided to print them, under the editorship of Mr. Earwaker. The first volume appeared in 1891, and the second and third, concluding the series, in 1892. In the Introduction to the first volume the editor pointed out the importance of these Records, and also stated that no similar accounts, going back to anything like so early a date, were known to be in existence.

The publication of these volumes was also very favourably received, and the *Manchester Courier* thus refers to the appearance of the first volume: "The Accounts have been printed *verbatim et literatim*, and the numerous editorial notes explanatory of obscure passages or dialectic or obscure words, as well as of persons and historical occurrences, add much to the interest of the volume. Both editor and printer have done their work in the most satisfactory manner; and the Council, in giving these Records to the world, has conferred an obligation on the student of history, and set an example that other public bodies possessed of similar archives would do well to imitate."

When the original manuscript volumes of the Court Leet Records were transferred to the Corporation, a number of ancient deeds and documents were handed over at the same time. These documents have recently been carefully examined, and a list of them is appended to this account. From that list it will be seen that they begin early in the 14th century, about the year 1312, and come down to about the year 1550. They relate to the early history of the manor of Manchester, and as they contain much information not previously known, it is to be hoped that they may be printed before long. The last payment for the purchase of the manorial rights falls due and will be made during the present year, 1894, and it would be very fitting to commemorate that event by the printing of these valuable documents. If this were done the early history of the manor of Manchester, of which so little is now known, would be brought down to the time when the Court Leet Records begin, and all the old records in the possession of the Corporation would then have been made available for historical students by being printed.

Mr. Earwaker has drawn up the following report on these documents, which deserves careful consideration :—

Short Report on the Early Deeds in the possession of the Corporation.

The valuable original deeds in the possession of the Corporation are about 80 in number, and relate almost entirely to the manor of Manchester and lands lying within that manor. They are all in Latin or Norman French, and some of them are of considerable length. They consist

(1) of documents connected directly with the many and various settlements of that manor, made from time to time in the 14th and 15th centuries by the families of the de la Warres and the Wests, successively lords of Manchester, by virtue of which the manor was held in trust by many distinguished personages such as Prince Henry, Cardinal of England in 1430; John, Archbishop of Canterbury in 1450; Henry Percy, Earl of Northumberland, and others;

(2) of very many grants of lands within the manor by the successive lords from the year 1312 to 1553;

(3) of leases of lands within the manor within the same period.

To many of these deeds the seals of the grantors are still attached, some of which are of much interest.

It may be said with certainty that none of these documents have ever been printed, and that they were quite unknown to Mr. Harland when he printed his "Mamecestre," or early records relating to Manchester, some 30 years ago. They not only supply some very valuable additions to what is there printed, but they help to correct many of his statements, which are inaccurate or untrustworthy for want of the information contained in these very documents.

They well deserve to be printed, and should it be decided to do so, they should be treated as the basis of an account of the "Early History of the Manor of Manchester between the years 1300 and 1553" on the following lines:—

(1) All these deeds to be arranged chronologically and printed, not in the original Latin or Norman French, but in careful translations, with all necessary annotations and explanations. By this arrangement they would fall into groups under the heads of the successive lords of the manor between the years 1300 and 1553, when the Court Leet Records commence.

(2) The account of each of these successive lords of the manor of Manchester should be made as complete as possible by printing other documents, relating to them, to be found in the Public Record Office, London, the British Museum, and in other public and private collections. For many years past Mr. Earwaker has made notes of any records referring to Manchester, and all such as related to the manorial history should be transcribed and printed in this book, together with others, which further and more extended researches would undoubtedly bring to light.

The result would be the publication of a very interesting and complete account of the early lords of Manchester (of whom so little is really known) which would very fittingly appear under the authority of the Corporation, the present lords of the manor, and based on the original documents in their possession.

Such a history would make an octavo volume of some 300 pages, uniform with the Court Leet Records and the Constables' Accounts, the cost of which would be similar to those, and which could be got ready and printed in about twelve months.

Ancient Documents relating to Manchester in the possession of the Corporation.*

No.	Date of Document.	Short Description of Document.
A. 1.	11th May 29 Edw. 1. (1301) ...	Copy in English of the Charter of Thos. Grelle.
2.	26 Oct. 4 Edw. 3 (1330) ...	Grant from John La Warre to his son John and Margaret his wife.
3.	14 June 21 Edw. 3 (1347) ...	A certified copy of the Inquisition on the death of John Lord La Warre.
4.	1 Aug. 6 Hen. 4 (1404) ...	In a fine levied at Lancaster on Monday 3rd. week of Lent in 4th. Henry 4th. acknowledges that William Houghton hath a just right to the Manor of Manchester and Keverdale.
5.	6 Oct. 13 Hen. 4 (1410) ...	Grant from Thomas Longeley and others.
6.	21 Sept. 1. Hen. 5 (1413) ...	The Manor of Ashton-under-Lyne held by John de Ashton.
7.	11th. Nov. 6. Hen. 6 (1427) ...	Quit claim of the Manor of Manchester.
8.	5 Jan. 6. Hen. 6. (1427-8) ...	Grant of the manor of Manchester from Thomas Longley and others.
9.	24 Apl. 12. Edw. 4. (1472)...	Grant of the manor of Manchester from George Archbishop of York and others.
10.	20 Apl. 17 Hen 7. (1501)...	Inquisition post mortem of Sir Richard West Knt. Lord la Warre.
11.	16 Nov. 27 Hen. 8 (1535) ...	Grant from Thomas West Lord la Warre.
12.	10 Mch. 34. Hen. 8 (1542-3) ...	Grant of lands tenements &c. in Dalton.
13.	14 June 35. Hen. 8 (1543) ...	Grant from Sir Thomas West Knt. Lord la Warre.
14.	30 Nov. 2 Edw. 6. (1548) ...	Do. Do.
15.	22 Nov. 3. Edw. 6. (1549) ...	Grant from the Right Honourable Sir Thomas West Knt. Lord la Warre.
16.	14 Oct. 1st. Mary (1553) ...	Grant from Thomas West Knt. of the Most Noble Order of the Garter, Lord la Warre.
17.	7 Oct. 27 Eliz. (1585) ...	Inquisition post mortem George Travisse, gentleman.
18.	6 Sept. 40 Eliz. (1598)...	Inquisition post mortem Thomas Beck.
19.	10 Oct. 4 Jac. 1 (1606) ...	Inquisition p.m. George Birch, gentleman.
20.	10 Oct. 4 Jac. 1 (1606) ...	Inquisition p.m. Ralph Proudlove of Manchester, gentleman.

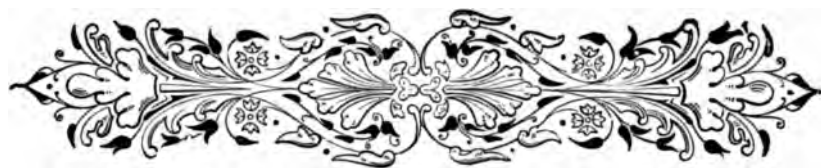
* NOTE.—These documents are not here arranged strictly chronologically, but as they were placed in separate bundles when originally received. They include some coming down as late as 1689.

No.	Date of Document.	Short Description of Document.
21.	18 Dec. 4 Jac. 1 (1606)	Inquisition p.m. James Ashton.
22.	22 Sept. 6 Jac. 1 (1608)	Inquisition p.m. Thomas Edge yeoman.
23.	4 Sept. 9 Jac. 1 (1611)... ..	Inquisition post mortem George Hulton.
24.	17 Apl. 4 Chas. 1st. (1628)... ..	Inquisition p.m. Rodger Bradshawe of Penington, gentleman.
25.	11 Aug. 6. Hen. 3. (1222)	Grant from Henry 3rd. to Robert Greslie.
26.	13 Aug. 11 Hen. 3. (1227)	Certified copy of a Charter of Henry III. granting a Fair in Manchester.
27.	20 Jan. (Octave of St. Hilary)... .. 3 Edw. 2. (1309-10)	Final Agreement between John la Warre and Johan his wife and Thomas Grelle.
28.	18 Aug. (Octave of Trinity) 9 Edw. 3. (1335)	John de Bohun Earl of Hereford and Essex Constable of England quit claims to John la Warre and Joanna his wife.
29.	1 Oct. 5. Hen. 4. (1403)	William Houghton clerk quit claim to William Thirnyng Knt. and others.
30.	25 Mar. 12. Hen. 4. (1411)... ..	William Thirnyng Knt. and others quit claim to Thomas la Warre clerk and Lord la Warre.
31.	31 May 8. Hen. 6. (1430)	Power of Attorney from Sir Reginald West Knt. Lord la Warre.
32.	9 July 13. Hen. 6. (1435)	Reginald West Knt. Grants power of Attorney to Edmund Trafford and others.
33.	9 July 13. Hen. 6. (1435)	Power of Attorney from John Stafford and others.
34.	20 Apl. 28. Hen. 6. (1450)... ..	Power of Attorney from Sir Reginald West Knt. Lord de Warre.
35.	11 May 2 Edw. 4. (1462)	Sir Richard West Knt. and others appoint Sir John Trafford Knt. to the Office of Steward of the Manor and Lordship of Manchester.
36.	2 Nov. 21 Hen. 8. (1529)	Lease from Sir Thomas West Knt. to William Marler.
37.	16 Oct. 38 Hen. 8. (1546)	Grant by Sir Thomas West Knt. to Alice Brownesworth.
38.	15 May 21 Eliz. (1579)	Sale of the Manor of Manchester.
39.	16 July 22 Eliz. (1580)	Recites Sale of the Manor of Manchester.
40.	16 July 23. Eliz. (1580-1)	Sir William West Knt. Lord la Warre appoints Richard Mosley and Lawrence Trafford his Attornies.
41.	18 July 23 Eliz. (1581)	Indenture between John Lacy and the Rt. Hon. Sir William West Knt. Lord la Warre and Thomas West Esq. his son.
42.	19 Feb. 27. Eliz. (1584-5)	Grant from John Lacy to George Elcocke.
43.	11 Feb. 39 Eliz. (1596-7)	Grant of the Right Worshipful Nicholas Mosley to Thomas Heaton.
44.	3 July 15 Ch. 1st. (1639)	Grant from King Charles 1st.
45.	18 May 23 Edw. 1. (1295)	John Milnegate otherwise called John son of Henry Jackson on the one part and Ralph Bexwik son of Christopher Bexwik.

No.	Date of Document.	Short Description of Document.
46.	24 Dec. 6. Edw. 2. (1312) ...	John la Warre Knt. Lord of Manchester grants to John Bibby one parcel of land in Manchester.
47.	24 Dec. 6. Edw. 2. (1312) ...	John la Warre Knt. Lord of Manchester grants to Thomas Marshall one parcel of land &c. in Manchester.
48.	30 Mch. 8. Edw. 2. (1315) ...	Agreement made at the Assizes held at Lancaster between John la Warre and Richard de Moston.
49.	18 Apl. 17. Edw. 2. (1324)...	John la Warre grants to Adam son of Robert de Radclive and Alice his daughter a certain parcel of land.
50.	16 Sept. 18. Edw. 2. (1324) ...	Grant from John la Warre to William del Birches.
51.	1 Oct 18. Edw. 2. (1324) ...	Grant from Adam son of Richard de Mamcestre to his son Robert.
52.	25 Feb. 1. Edw. 3. (1326-7) ...	Roger Faucons quit claims to Adam son of Richard del Milnegate.
53.	4 July 2. Edw. 3. (1328) ...	Edward de Bohun appoints Thomas de Aldene his Attorney.
54.	20 Sept. 2. Edw. 3. (1328)...	John de Bohun Earl of Hereford and Sussex. Constable of England grants to his brother Edward de Bohun.
55.	20 Sept. 2. Edw. 3. (1328)...	John de Bohun granted for life an annual rent of £30.
55a.	S. D. ...	Grant from Robert son of Robert son of Thomas de Mamecester to Adam son of Richard heir of Roger.
56.	1 Feby. 4. Edw. 3. (1329-30) ...	Grant from John de Claydone parson of Manchester to John son of Roger la Warre.
57.	10 Sept. 5. Edw. 3. (1331) ...	Grant from Roger la Warre to John son of Adam son of Richard.
58.	11 Nov. 5. Edw. 3. (1331) ...	Grant of land in Openshaw from John la Warre Lord of Manchester.
59.	11 Nov. 5. Edw. 3. (1331) ...	John la Warre Lord of Manchester grants to Adam son of Richard one messuage &c.
60.	7 Jan. 5. Edw. 3. (1331-2)...	Grant from John la Warre to John de Salford de Wakerlegh and Alice his wife.
61.	Sept. 7. Edw. 3. (1333) ...	Grant from John de la Warre to Robert del Wodehous and Agnes his wife.
62.	4 Aug. 8. Edw. 3. (1334) ...	Grant from John la Warre to Adam son of Richard de Mamcestre.
63.	Apl. 14. Edw. 3. (1340) ...	Grant from John la Warre to Margaret Shepelee.
64.	9 Aug. 14. Edw. 3. (1340) ...	Grant from John la Warre to Roger Thynnewyt and Agnes his wife.
65.	9 Aug. 19. Edw. 3. (1345)...	Grant from John la Warre to Roger del Barres and Alice his wife.
66.	29 Sept. 22. Edw. 3. (1354) ...	Roger la Warre grants to Thomas Bulder.
67.	29 June 28. Edw. 3. (1354) ...	Roger la Warre grants to Richard son of Robert de Mamcester.

No.	Date of Document.	Short Description of Document.
68.	20 July 31 Edw. 3. (1357)	... Roger la Warre grants the hamlet of Open-shagh to Thomas Bothe and Robert his son.
69.	13 Sept. 31. Edw. 3. (1357)	... Roger la Warre grants to Richard son of Robert.
70.	29 Sept. 31. Edw. 3. (1357)	... Roger la Warre grants to Richard Robynson and Henry del Holte.
71.	16 Nov. 4. Ric. 2. (1380)	... William de Lyualus quit claims to John Maunton.
72.	19 Jan. 4. Ric. 2. (1380)	... John la Warre grants to Robert Awpe.
73.	13 Jan. 4. Ric. 2. (1380-1)	... John la Warre grants to John Marler and Henry Benett.
74.	5 Apl. 4. Hen. 4. (1403)	... Henry son of Henry Earl of Northumberland and others of the 1st. part Thomas la Warre Clerk of the 2nd part and John de Assheton Knt. of the 3rd. part.
75.	10 Nov. 33. Hen. 6. (1454)	... Thomas Bothe Armiger grants to Thomas Gay.
76.	10 Feb. 1. Ric. 3. (1483)	... Thomas West Lord la Warre and Elizabeth his wife grant to Thomas Rudd of Manchester.
77.	20 Feb. 11. Hen. 7. (1495-6)	... Thomas West Knt. Lord la Warre grants to Ralph Bexwik son of Christopher Bexwik
78.	17 Dec. 11. Chas. 1st (1635)	... Inquisition post mortem of John Yate.





Codification of the Local Acts of Manchester.



RIOR to the incorporation of Manchester, which took place by Royal Charter in the year 1838, the town was governed by a Boroughreeve and by Commissioners of Police.

These Commissioners derived their powers from certain Acts of Parliament (the first of which was passed in the year 1765), and their jurisdiction extended, singular to say, over the towns of Manchester and Salford.

The Act of 1765 was repealed by another Act passed in 1792, entitled "An Act for cleansing, lighting, watching, and regulating the streets, lanes, passages, and places within the towns of Manchester and Salford in the County Palatine of Lancaster; for widening and rendering more commodious several of the said streets, lanes, and passages; and for other purposes therein mentioned."

This Act recited that the town of Manchester was, at the time of obtaining the Act of 1765, a large, populous, and trading town; and the town of Salford was then a populous and trading town; and that the said towns respectively had since that time greatly increased both in trade, populousness, and extent of buildings; that the powers and

provisions in the Act of 1765 were found insufficient for the purposes intended ; that some of the streets and other public passages within the said towns respectively were narrow, inconvenient, and unsafe for travellers and carriages, and no provisions were made in that Act for widening the same, for opening proper communications with some of the said streets, for establishing a nightly watch, for licensing and regulating hackney coaches and chairs, or for ascertaining the breadth of party-walls within the said towns respectively ; and that it would be a great improvement, and tend to the safety and convenience, not only of the inhabitants of the said towns respectively, but of all persons resorting to or passing through the same, if proper provisions were made and powers granted for effectually accomplishing the several ends and purposes aforesaid, and otherwise providing for the peace, security, and accommodation of the inhabitants of the said towns.

The Act of 1792 then proceeded to constitute and confer powers upon the Commissioners, who were designated "Commissioners of Police," and by subsequent Acts these powers were extended and enlarged.

The Acts referred to were, however, so far as the town of Manchester was concerned, repealed in the year 1851, and it is not necessary further to refer to them.

A series of Acts, commencing with "An Act for better lighting with gas the town of Manchester, in the County Palatine of Lancaster," which was passed in the year 1824, authorised the Commissioners of Police to provide a supply of gas, as well for lighting the public lamps of the town of Manchester as for the use of the inhabitants thereof in their private dwelling-houses, warehouses, shops, taverns, and other establishments.

These Acts continued in operation, and were enforced by the Commissioners of Police, until the year 1843, when the powers of such Commissioners were transferred to the Corporation by Act of Parliament, and ultimately, in 1851, they also were repealed, and need not be further adverted to.

The supply of water to the towns of Manchester and Salford was, prior to the year 1847, under the control of a Company entitled "The Company of Proprietors of the Manchester and Salford Waterworks."

Such Company acted under a series of Acts of Parliament, the first of which was passed in 1809, and was entitled "An Act for more effectually supplying with water the inhabitants of the towns of Manchester and Salford, in the parish of Manchester, in the County Palatine of Lancaster." This Act was amended by subsequent Acts passed in the years 1813, 1816, 1821, 1823, 1841, and 1846. These Acts have been practically superseded by the legislation obtained at the instance of the Corporation, commencing with the Manchester Corporation Waterworks Act, 1847.

As previously mentioned, the town of Manchester was incorporated in the year 1838. Since that year the Corporation have obtained about sixty Acts of Parliament, all of which are now to a greater or less extent in operation exclusively within the City. These Acts constitute what may be termed the local legislative code for controlling and regulating (in matters not exclusively within the purview of the public law of the country) the whole of the municipal government of the City in its various ramifications.

They relate to a great variety of subjects, including the Police, their powers and duties; the Fire Brigade, Weights and Measures, Hackney Carriages, Carts, Omnibuses, Porters and Brokers, Markets and Fairs, Slaughter-houses and Meat, Sanitary Conveniences, Nuisances, Infectious Diseases and Hospitals, Insanitary Property, Labourers' Dwellings and Lodging-houses, Scavenging and Cleansing, Highways, Streets, Bridges, Courts, Passages, Sewers and Drainage generally, Tramways, Telegraph and Telephone Wires and Apparatus, Rivers, Streams and Watercourses, Street Improvements and Buildings, Gas Supply, Electric Lighting and Street Lighting, Water Supply, Art Gallery, Baths and Washhouses, Borrowing Powers, Rating, Charities, the Corporation Officials' Thrift Fund, Parks and Open Spaces, Cemeteries, Burial Board and Libraries, the Town Hall and Corporate Buildings, the Court of Record, the Ship Canal, and many other matters.

Some of the Acts relate exclusively to one department of administration, as, for instance, the waterworks, whilst others have relation to various departments of local government. Vast changes have taken place in the fifty-six years which have elapsed since the Charter of Incorporation was obtained, and the numerous amendments in the local Acts which have from time to time been found necessary are

contained in one or other of the subsequent Acts. Many of the clauses in the earlier Acts have grown obsolete and inoperative, whilst others have been so altered and amended as to render the original provisions practically useless or misleading. Then, again, numerous Bye-laws, Regulations, and Orders in Council have been from time to time ordained and issued by the City Council, with the sanction of the proper Government Departments, and these again have been from time to time altered and amended. Important agreements, schemes, and arrangements, too, having the force of law, have at different times been entered into, which have enlarged or controlled the rights and powers of the Corporation.

It came to pass, in the complexity of these Acts, Bye-laws, Orders, and other matters, that the City Council and its various Committees found it difficult to ascertain the exact position of the law on many subjects without much trouble and research, and the citizens generally were unable to make themselves cognisant of the statutory provisions by which they were governed, and which they were expected to obey. In these circumstances, on the motion of Alderman Leech (the present Deputy-Mayor), a resolution was passed by the City Council on the 19th November, 1890 :—

That a Special Committee be appointed to consider and report on the desirability of consolidating, codifying, or collating the various Acts of Parliament and statutes that have been passed for the government of the City of Manchester.

This Committee, after examining and considering the Acts, Bye-laws, &c., which had to be dealt with, sought information from other towns who were similarly circumstanced with Manchester, and they obtained from Glasgow, Aberdeen, Newcastle, and Sheffield, specimens of the manner in which the local Acts of those towns had been codified or printed together, with a suitable index, for the information of the inhabitants.

As the result of careful consideration, and with the experience of other towns (notably Birmingham and Leeds), the Committee, for various reasons, came to the conclusion that the preferable course to adopt was to compile and issue, for public information, a codification of the numerous Acts, Bye-laws, &c., in operation in the City, in such a form as that any person may readily find the provisions in relation to any particular subject collected and arranged together. Accordingly, on the 26th October, 1892, the Committee reported to

the Council that it would be useful to codify the Acts under suitable heads, by which means a working code could be made out, which, when printed, would be available for the principal departments of the Corporation, and which would also be suitable for publication, a complete index being supplied.

This work is now in active progress, and it may be interesting to state that it is being carried out in a series of parts, under headings corresponding with the departments of the Corporation.

The following is a brief summary of such headings:—Part 1 is intended to contain the provisions in relation to the business conducted by the Watch Committee, the Markets Committee, the Sanitary Committee, and the Cleansing Committee. Part 2 will contain the clauses dealing with the business transacted by the Paving, Sewering, and Highways Committee, the Improvement and Buildings Committee, and the Rivers Committee. Part 3 will relate to the Gas Committee and the Waterworks Committee. Part 4 will contain matters appertaining to the Art Gallery Committee, the Baths and Wash-houses Committee, the Finance Committee, the Parks and Cemeteries Committee, the Public Free Libraries Committee, the Town Hall Committee, the Technical Instruction Committee, and the Ship Canal Committee.

Part 5 is intended to be supplementary to the preceding parts, and to contain matters which are common to all the Committees, as, for instance, lands clauses, provisions relating to the Council and Committees generally, provisions relating to procedure, execution of works, recovery of moneys, legal proceedings generally and appeals, provisions relating to bye-laws generally, also general saving and protective clauses, clauses relating to the school district and the School Board, to the employment of children, the extension of the City boundaries, wards, the representation of added areas, compensation clauses, and miscellaneous clauses not otherwise classified, together with the charters, commissions, and general orders relating to the City.

In addition to the foregoing, it is intended to issue a sixth Part, containing a collection of the clauses which are inserted in railway and other Acts for the protection of the Corporation and the City. It is also proposed to append to each Part all Public Acts and

portions of Acts which are incorporated with the local Acts ; also all bye-laws, regulations, instructions, and general public forms in use in the several departments.

It is believed that this work, when completed, will be of great utility, not only to the Council and its Committees and individual members, but also to the officials of the Corporation and the citizens and public generally. As already stated, the work is in active preparation, and it is hoped that the same may be completed during the municipal reign of our present Lord Mayor, and be one of the many useful works which will commemorate his eventful term of office.





Street Improvements.



THE streets of Manchester have for centuries been more or less under the control, first of the Court Leet, then of the Commissioners of Police and the Commissioners of Improvement, who received powers greater than those of the Manorial Court, and finally of the Manchester Corporation, who have inherited the functions of their predecessors, and have acquired many additional powers by general and special Acts of Parliament. From maps and other documents it is possible to reconstruct on paper the City as it was two or more centuries ago. It was not until the first quarter of the nineteenth century that any serious attempt was made to alter the plan of the town. Perhaps it would be more correct to say to *make* a plan, for whilst Manchester was growing in every possible direction there had been no control over the operations of builders. The central parts of the town were narrow, inconvenient, and totally inadequate to the strain of the great traffic that then began to flow through the streets. In 1791 an Act of Parliament was obtained, which vested the lighting, cleaning, and watching of both Manchester and Salford in the Boroughreeves, Constables, Warden and Fellows of the Collegiate Church, and the owners and occupiers of any building of over £30. value. The Commissioners, however, soon after divided and formed two separate bodies. In 1821 the Act for the widening of Market Street was obtained, and put into force by Commissioners for that purpose. In 1829 the constitution of the Commissioners of Police was modified. The Market Street improvement was completed, in 1834, at a total cost of £232,925. Previously, the main street of the town had been so narrow that in some parts it would

scarcely admit of the passage at the same time of a vehicle and a foot passenger, and the latter had to take refuge in doorways. Other streets in the vicinity were equally inconvenient and dangerous.

In 1822 the Town Hall in King Street was begun, and it was completed in 1825. At a meeting of the Commissioners held there 17th September, 1828, an Improvement Committee was appointed, and Mr. Gilbert Winter became chairman. This body took over the Market Street Commissioners' Accounts in 1833-4, and in its turn the powers of the Improvement Committee were absorbed by the Corporation. The chief alterations made may now be named. The cost of these improvements has been defrayed out of the profits of the municipal gas works. A new thoroughfare, *Corporation Street*, sixteen yards wide, connected Market Street with Hanging Ditch, and was subsequently extended to Cheetham Hill Road. The latter section was made 20 yards wide. Only sufficient land was purchased for this purpose, and in 1869 the photographs which were taken showed that the owners had not, as was expected from them, erected new and suitable buildings. Lower King Street, now called *King Street West*, is a continuation, 14 yards wide, of King Street from Deansgate to Albert Bridge. By the making of *Victoria Street* a new thoroughfare was supplied from Market Street to Hunt's Bank. This street, originally 16 yards wide, has since been made 20 yards wide. The widening of *Cross Street* is still incomplete, although it was one of the first to be taken in hand. The former Apple Market has been converted into an extension of *Fennel Street* to Hunt's Bank. Charter Street, now *Dantzic Street*, was a new road, 14 yards wide, made from Withy Grove to Miller Street. *City Road* was extended from Great Jackson Street to Albion Street. Here also it has been found that the owners, from whom land was purchased to make the street, have done nothing towards the development of this thoroughfare. *Portland Street* was extended from Princess Street to Oxford Street at a width of 22 yards. It is the finest warehouse street in the City. On the erection of the new Town Hall the surrounding streets were widened, and the fine open space of *Albert Square* was formed. *John Dalton Street*, which is 16 yards wide, was an entirely new thoroughfare, and now connects in one line Bridge Street and Princess Street. *Pump Street*, which ran from London Road to Chorlton Street, was originally 8 yards wide, but many years ago was

widened to 12 yards. It is now absorbed in Whitworth Street, which has a width of 20 yards, and connects London Road with Oxford Street. *Queen's Road* is a new thoroughfare, 18 yards wide, across the valley of the Irk, and connects Rochdale Road with Cheetham Hill. The landowners were contributors to the cost of this undertaking. The portion of *Brown Street* between King Street and Booth Street is an early improvement, but a small portion of it still remains to be set back. There have been various changes in the neighbourhood of the *Royal Exchange* consequent upon its successive enlargements. Some streets have been absorbed, whilst the surrounding thoroughfares have been widened by agreement with the Directors. There have been two successive improvement schemes for *Deansgate*. Parliamentary powers were obtained in 1869 to widen that street between Victoria Bridge and John Dalton Street. In this way a narrow, tortuous lane was converted into a broad road. *Deansgate* and *St. Mary's Gate* were made 20 yards wide, and the land not needed for the roadway was quickly sold and covered with handsome buildings. In 1875 powers were obtained for the second portion of the *Deansgate* improvement, and the widening process was continued from John Dalton Street to Knott Mill. This happened coincidently with a great depression in the real property market, and the Corporation were not so successful in the sale of the residue of the land. The opening of the Ship Canal, it is confidently expected, will cause a demand for important building operations. The improvement of *Albert Road*, *Denmark Road*, *Victoria Road*, and *Rusholme Road*, was the work of the Chorlton Committee before the amalgamation of the out-townships in 1875. The cost was defrayed from the gas profits of the township of Chorlton. *Albert Road* was practically the extension of Plymouth Grove to Stockport Road and Birch Lane; *Victoria Road* was a new way from Plymouth Grove to High Street; *Denmark Road*, which is 18 yards wide from Ackers Street to Oxford Road, is cut through land purchased from the estate of the late Mr. Crompton Potter, and the residue is nearly all disposed of. The *Rusholme Road* improvement consisted of widening its Ardwick Green end. At *New Islington* the road from Union Street to Bradford Street was formed 14 yards wide. *Mount Street* has been made 18 yards wide from Albert Square to Lower Mosley Street. Some of the residue of the

land taken for this improvement is yet on sale. *Upper Jackson Street* has been extended from Preston Street to Chapman Street. *Peter Street* has been widened on the southerly side, so as to be in line with the Free Trade Hall, from Watson Street to Deansgate. *New Quay Street* is a new thoroughfare, 16 yards wide, which begins opposite to St. Mary's Hospital, crosses the Irwell by a new bridge, and so forms another entrance to the Borough of Salford. The new activities caused by the completion of the Ship Canal will, it is expected, lead to the appropriation of the vacant land which is for disposal in this locality. *Tib Street* was, in 1875, widened to 10 yards from Market Street to Thomas Street, and St. Paul's Church was then taken down and a new edifice erected in Oldham Road. This removal enabled *Turner Street* to be continued its full length into Tib Street. By an arrangement with the owners, *Withy Grove* has been widened from Garden Street to Mark Lane, and a much needed relief has thus been given to the congested traffic in this part. *Spring Gardens* has been improved at various times, so that there now remains only one small portion to be set back in order to give a uniform width throughout its whole length. The Market Street end was improved under the 1875 Act, and the adjoining land has been sold and built upon. The opening between King Street and Chancery Lane and Fountain Street is a new thoroughfare, and, although costly, is of great utility. Here, also, the residue has been sold, and handsome buildings have been erected. The whole length of the narrow *Port Street*, from Dale Street to Piccadilly, was set back in a line with Newton Street, under the powers of the Act of 1872. The plots of land not needed for the roadway have been sold, and new buildings have been erected. *Princess Street* has been widened from Albert Square to the Rochdale Canal bridge. Important buildings have been placed on the surplus land, so that this street is now architecturally one of the finest thoroughfares in the City. *Greenheys Lane*, formerly a narrow country lane, with pleasant literary associations, has now been made 18 yards wide from Denmark Road to Burlington Street. It has lost its rural charms, but it is a useful urban or suburban road. *Milton Street* is another recent improvement in the Chorlton district. The continuation of this thoroughfare into Plymouth Grove is a great convenience for the inhabitants of this locality.

Such are the most important of the many street improvements effected by the Corporation within a recent period. After this outline of what has been actually accomplished, we may enumerate the schemes now in course of execution or in contemplation. *Whitworth Street*, which is to extend from Oxford Street to London Road at a width of 20 yards, will be connected with an extension of *Fairfield Street* on the other side of London Road. *Chorlton Street*, from Whitworth Street to Canal Street, has been widened to 20 yards, and thus the heavy traffic coming from the manufacturing districts by way of Fairfield Street can reach the neighbourhood of Portland Street by an easy gradient, and avoid the steep part of London Road between Store Street and Ducie Street. The whole of the insanitary property in the Whitworth Street area will be demolished, and the portions of land remaining after these improvements have been effected will be available for building purposes under new and better conditions. Whitworth Street, whilst connected at one end with Fairfield Street, will at the other be in line with *Gloucester Street*, which is to be made 20 yards wide, and with *South Junction Street*, and *Gaythorn Street*, which are to be made 25 yards wide. In this way there will be a continuous thoroughfare from the north-eastern districts and boundary of the City to the Ship Canal. The uniform width of the whole of *Chester Road* will be 25 yards, and also of *Hulme Hall Road*, which will be the principal approach to the Manchester Docks. It is intended to make *Oxford Street* a uniform width of 25 yards from St. Peter's Church to Moss Lane East, and its continuation—*Wilmslow Road*—a width of 24 yards from the beginning of it to the boundary of the City at Brook Road, Withington. Arrangements have been made with the Whitworth Legatees and the Trustees of the Union Chapel for the making of a Boulevard from the Eye Hospital to York Place, and eventually, it is hoped, to High Street. *Cornbrook Road* will be an alternative way of approach to the Manchester Docks from Chester Road, and is to be 25 yards wide. This thoroughfare will not, however, be available for heavy traffic, in consequence of the gradients and the limited headway under the railway bridges. The main outlet of Manchester on the Bury side is *Great Ducie Street*, which has now become inadequate for its traffic. It has, therefore, been decided to make it 21 yards wide, and the setting back has already been

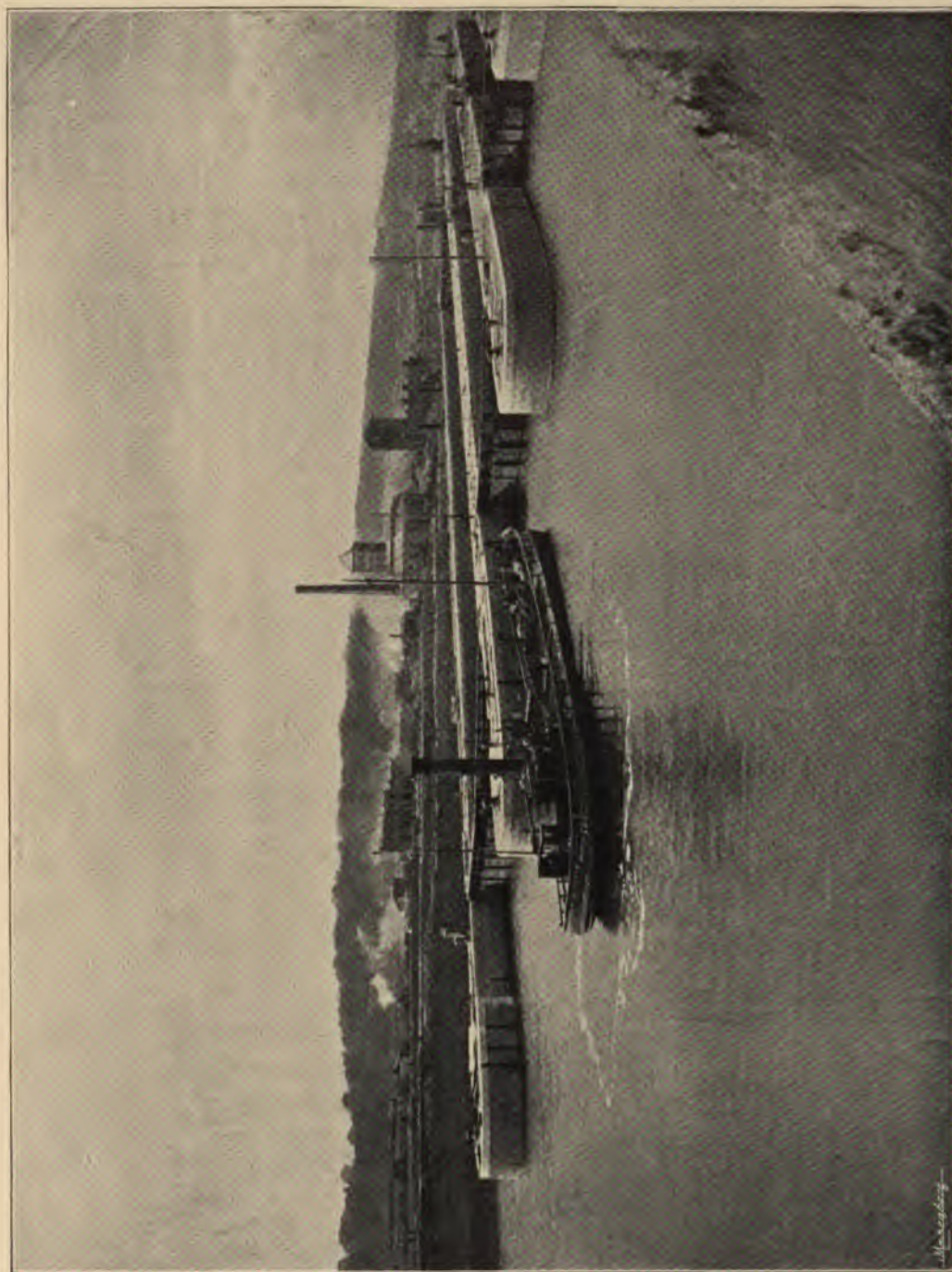
accomplished on the easterly side, at the Boys' Refuge, and also near the corner of Brewery Street. The want of a *New Street between Rochdale Road and Cheetham Hill Road* has long been felt. The distance is 1,010 lineal yards, but the nearest route, Queen's Road, for vehicular traffic is 2,800 yards long; the route by Rochdale Road, Miller Street, Ducie Street, and Cheetham Hill Road is 2,770 yards. There is another way of 2,210 yards by Rochdale Road, Gould Street, Roger Street, Red Bank, and North Street, but the gradients are very steep. For the construction of the proposed street, a viaduct 54 feet high would have to be carried over the Irk valley. A portion of this has already been erected over the Lancashire and Yorkshire Railway, and a footway has been provided from Bank Street to Collyhurst Road. This has been done by the Railway Company, as substitutes for the footway and streets absorbed in the widening of the line under the Act of 1872. The cost of this proposed street would be £36,000, and the delay in its construction is due to the fact that the landowners, whose property would be greatly enhanced in value, have so far declined to pay any portion of the cost of this much needed improvement. *Hanging Ditch* is at present frequently blocked with its traffic, and is to be made 18 yards wide. The Corporation have acquired power by the Act of 1893 for the widening of *Shudehill* from Hanover Street to Miller Street. It is also proposed to extend *Mayes Street* into Shudehill and also into Corporation Street, so as to form an additional approach to Smithfield Market. The same Act authorises the widening of *Rochdale Road* to 25 yards, from Swan Street to Victor Street. This will be a relief to a thoroughfare which is the only outlet for the northern district, where extensive building operations have been carried on in recent years.

Lastly may be named the projected changes in the neighbourhood of the Cathedral. The Corporation have agreed to pay to the authorities of the "Old Church" of Manchester a sum of £7,000, and to convert the graveyard into an ornamental open space similar in character to those of St. Anne's and St. Mary's. At the same time it is intended to widen Half Street. The improvements in the locality, which has for so many centuries been a centre of Manchester life, will not only be an advantage for the business

of the City, but will do something to restore the picturesque surroundings in which the church was originally placed.

The Improvement Committee have steadily kept in view the needs of the ever-increasing trade and industry of the City, and have endeavoured to avoid both the rashness and the timidity that are alike, and perhaps equally, detrimental. This imperfect sketch of their operations will show that they may claim to have been successful in their efforts.





EASTHAM LOCKS.



Assistance Rendered to the Ship Canal.



THE project of constructing a canal from Manchester to the sea, navigable by sea-going vessels, has at intervals engaged the public mind since the beginning of the last century—indeed a serious attempt to carry out such a scheme was made so early as 1712.

In the year 1882 the idea was revived. Local industries were depressed, many important industrial concerns removed their works to districts where the economic conditions were more favourable, and it became evident that if Manchester was to retain its importance as a centre of trade and industry, the cost of production and distribution must be reduced by improving and cheapening the means of transit.

The project was entered upon with enthusiasm. The late Daniel Adamson, a man of great energy and powerful will, took a leading part in exciting and directing public opinion, and the project was approved with acclamation at scores of public meetings in the district, and approved by resolutions of the Manchester and Salford Corporations, and the Councils of neighbouring Municipalities.

Plans for carrying out the work were prepared by Mr. E. Leader Williams, and a severe struggle ensued to secure Parliamentary sanction. The project was submitted to the ordeal of no less than six Committees of the Lords and Commons, and £150,000. spent in the mere preliminaries.

The Ship Canal Act was passed in 1885, and the Company was created with a capital of £8,000,000. in shares, and power to borrow £2,000,000. on mortgage debentures.

In 1886 Parliamentary powers were obtained to pay interest (not exceeding £752,000.) out of capital, but the borrowing powers of the Company were to be reduced by one-fourth of the amount so paid.

In 1887 the share capital was divided into £4,000,000. of ordinary and £4,000,000. preference shares. In 1890 the borrowing powers were increased by £600,000., to rank as a second charge; thus making the total capital powers of the Company £10,412,000., after allowing for the reduction of £188,000. arising from the payment of interest.

The contract for the completion of the works was let to the late Mr. T. A. Walker for the sum of £5,750,000., it being stipulated that £500,000. of this amount should be accepted in shares, and the work was commenced by the turning of the first sod at Eastham on November 11th, 1887.

It was found necessary in 1885 to take Parliamentary powers to purchase the Mersey and Irwell Navigation and the Bridgewater Canal Undertaking, and the price was fixed at £1,710,000. The purchase was completed, and these undertakings were transferred to the Ship Canal Company in August, 1887.

The death of the contractor in November, 1889, placed the directors in an extremely difficult position, and an agreement was made on November 24th, 1890, by which the contracts between the Company and the executors of Mr. Walker were determined on certain terms. The executors turned over the work as it stood, and relinquished all claims beyond the payments which had already been made on the certificates of the engineer, but with the proviso that the Company should pay certain bills and accounts then outstanding for materials supplied and work done, and that under certain conditions a commission might accrue to the executors, dependent upon the amount realised by their assistance for sale of plant after the completion of the works.

Towards the close of 1890, it became clear to the directors, who had now undertaken the conduct of the works, and become, so to speak, their own contractors, that their resources would be inadequate to complete the Canal, and approaches were made to the Corporation of Manchester to ascertain whether financial help could be obtained from this source.

The preliminary negotiations were conducted between Sir Joseph C. Lee (the Deputy-Chairman of the Company) and the then Mayor (Alderman Mark), who sought the advice of some of the senior members of the Council. The amount thought to be necessary was a million pounds, which amount, however, was not based upon any detailed and reliable estimate. A friendly disposition was manifested, according with the sentiment which had always been entertained towards the enterprise, but a more exhaustive investigation of the position of the undertaking and of the probable amount of capital required to complete was suggested, and this led to a formal application from Lord Egerton (the Chairman of the Board) to the Mayor of Manchester on January 31st, 1891; and in a further letter, dated 10th February, 1891, the amount required was stated to be £1,765,072, exclusive of deferred works.

On February 3rd, a special meeting of the General Purposes Committee was called to receive "a report from the Mayor upon a subject of great public importance," and it was then recommended to the Council that a Special Committee be appointed to consider the question of affording financial help to the Canal Company, to obtain full information, and to report. The following members were appointed:—

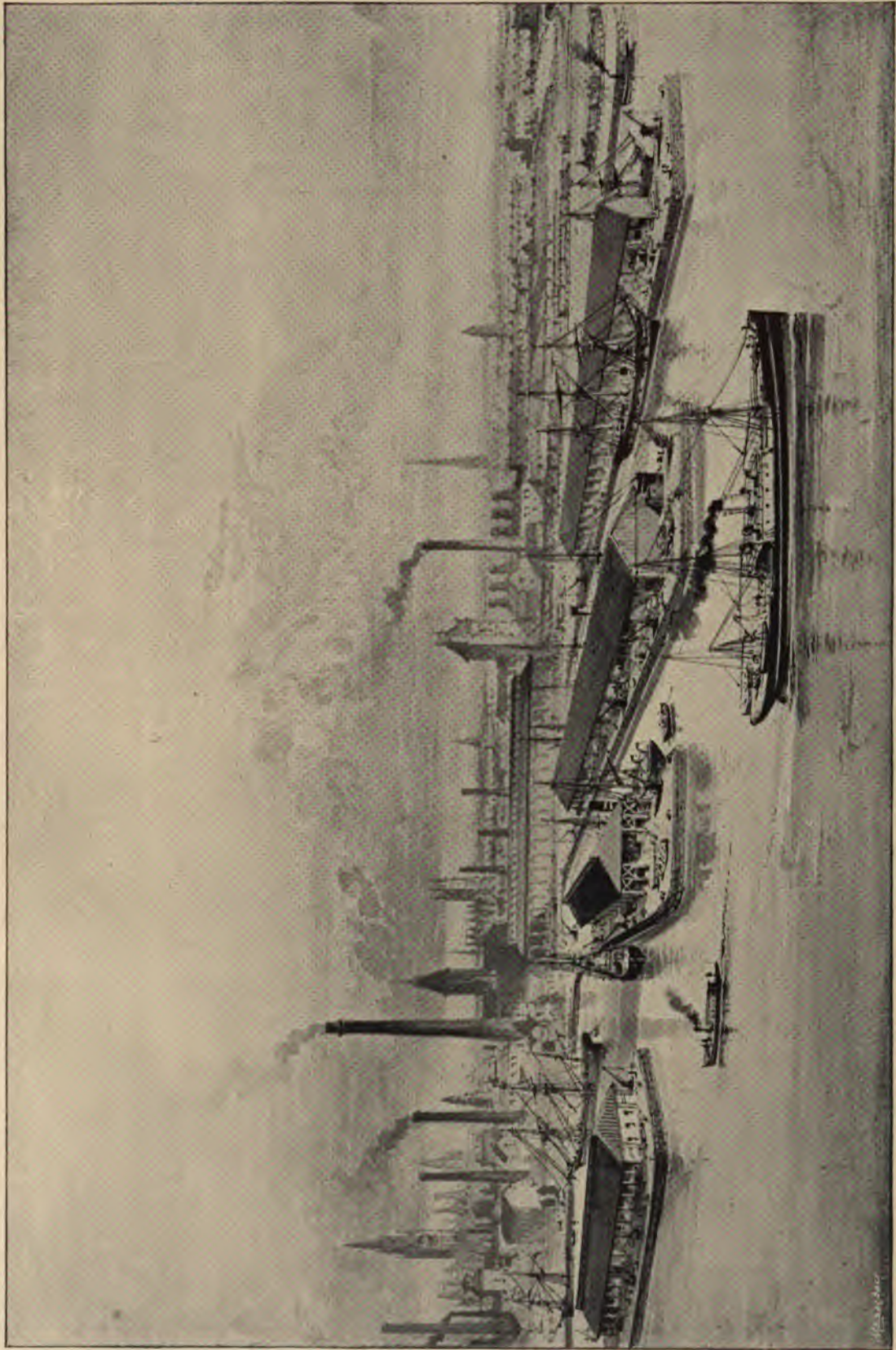
Alderman Mark (Mayor), Chairman of the Watch and Town Hall Committees.
 Alderman Smith, Chairman of the Sanitary Committee.
 Alderman J. F. Roberts, Chairman of the Markets Committee.
 Councillor S. C. Thompson, Chairman of the Parks and Cemeteries Committee.
 Councillor Southern, Chairman of the Libraries Committee.
 Alderman Sir J. J. Harwood, Chairman of the Waterworks Committee.
 Alderman King, Chairman of the Finance Committee.
 Alderman Lamb, Chairman of the Gas Committee.
 Councillor Clay, Chairman of the Improvement and Buildings Committee.
 Alderman Heywood, Chairman of the Paving, &c., Committee.
 Alderman J. Thompson, Chairman of the Rivers Committee.
 Alderman Shaw, Chairman of the Cleansing Committee.
 Alderman A. Evans, Chairman of the Baths and Wash-houses Committee.
 Alderman Hopkinson, Chairman of the Art Gallery Committee.
 Councillor Hoy, Chairman of the Technical Instruction Committee.

The Committee commenced its labour by instructing Mr. G. H. Hill to examine the engineering aspects of the enterprise, and Mr. Thackray (the assistant treasurer) to investigate the financial position as based upon the statements certified by Messrs. Thomas,

Wade, Guthrie, and Co. The result of their deliberations was presented in a report dated March 3rd, recommending that the money necessary to complete the Canal should be lent by the City. A readiness to join in the assistance was shown by Salford, but difficulties in securing joint action with sufficient promptitude led the Corporation to undertake the whole responsibility. Mr. Moulton, Q.C., who had already been consulted on the legal aspects of the question, was instructed to draft a Bill, empowering the Corporation to borrow for the purpose £3,000,000, which, it was expected, would more than cover all possible requirements. It was further provided that five members of the Council should represent the Corporation on the Board of Directors. The Bill received the Royal Assent July 28th, 1891, and on August 5th the Mayor (Alderman Mark), Sir J. J. Harwood, and Messrs. J. W. Southern, H. Boddington, and S. C. Thompson were appointed Corporation Directors.

In October, 1891, it became evident that the estimate made by the Company's engineer in January of that year would be greatly exceeded. When that estimate was made the works were partially flooded, and it was now found that errors existed involving no less a sum than £860,000. The error was not of a character which permitted discovery in the investigation by Mr. Hill, and beyond this error in the estimated quantity, further sums demanded by unforeseen necessities of construction made it evident that the sum of three millions, to lend which powers had been taken, would prove inadequate. The result of an investigation into this discrepancy was the appointment of an executive committee of seven members, four of whom were Corporation Directors, with powers to control the expenditure of all moneys for the purpose of construction, and the purchase of all stores and materials.

In July, 1892, the Corporation was again appealed to. It was evident that a further sum of a million and a half would be required. This led to an entire change in the situation. The Corporation was too deeply committed to the completion of the scheme to think of drawing back, but it was clear that if the additional capital was found by the City, the Board must be entirely reconstituted in such a way as to give the Corporation an absolute majority on the Board.



POMONA DOCKS.

After a short period of friction, and after unsuccessful attempts to raise the additional capital from other sources upon terms with which the Corporation of Manchester could agree, an arrangement was entered into with the Ship Canal Company whereby the Corporation should have a majority on the Board, and the Corporation Directors should appoint the Deputy-Chairman. The Corporation, on the other hand, agreed that the power to fix rates of toll, &c., should be vested in a Committee composed of five Company's Directors and four Corporation Directors. A second Bill was promoted, seeking power to borrow and lend a further sum, not exceeding £2,000,000. sterling. Of this sum, one-and-a-half millions has been borrowed, and will be found adequate to complete the Canal so far as to open it for ships of the largest class to come up to the Manchester Docks.

All the moneys lent by the Corporation are secured by mortgage debentures, bearing interest at the rate of $4\frac{1}{2}$ per cent. per annum. The Corporation borrowed in the open market by offering for tender Three per Cent. Redeemable Stock. This stock was tendered for at prices which, including expenses of management and stamp duty, incurred a cost to the Corporation of £3. 4s. 6d. per cent. on the first loan, £3. 4s. 8d. on the second, and £3. 2s. 3d. on the third.

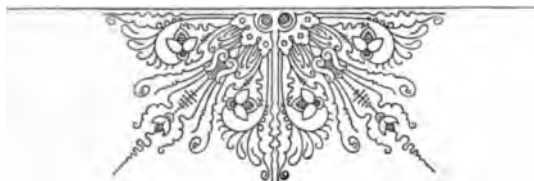
It may be interesting to record that for the three issues of one million and a half each, the total tenders were as under:—

1st Issue, August 5th, 1891	...	...	...	£2,701,450
2nd Issue, March 9th, 1892	...	...	...	£4,589,500
3rd Issue, June 27th, 1893	...	...	...	£2,552,500

The issue of the loans was entrusted to the Bank of England, under the direction of a Sub-Committee of the Finance Committee, consisting of the Chairman (Alderman King), Aldermen Mark and Joseph Thompson, and Councillors Southern and Murray.

Upon the reconstructed Board, consisting of 21 members, the following eleven were appointed Corporation Directors:—The Right Hon. the Lord Mayor of Manchester (Alderman Marshall), Aldermen Sir J. J. Harwood, Mark, Leech, S. C. Thompson, Joseph Thompson, Walton Smith, and Clay; Councillors Southern, McDougall, and Pingstone. Alderman Sir J. J. Harwood was made

Deputy-Chairman of the Board, and Chairman of the Executive Committee; Alderman Leech, Chairman of the Land and Estates Committee; and Councillor Southern, Chairman of the Purchasing and Stores Committee. The other Committees of the Board are presided over by the Shareholders' Directors, viz.: Traffic and Rates, Mr. J. K. Bythell; Finance and Office, Alderman W. H. Bailey; Bridgewater Navigation, Mr. C. J. Galloway; Parliamentary, Sir Joseph C. Lee.



127

127

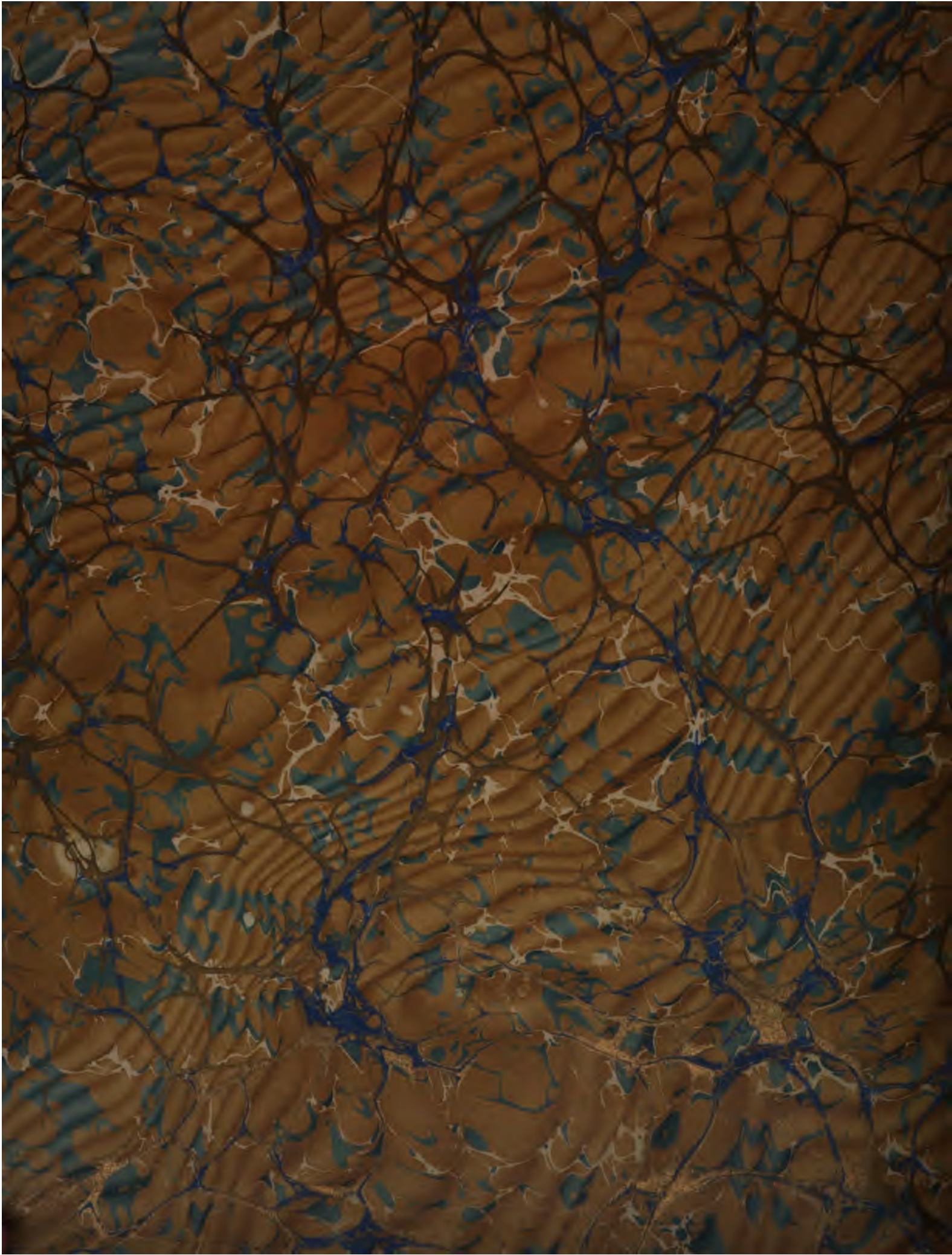
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